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EDITORIAL.

Sulphate of Quinine.

THE extremely low price at which sulphate of quinine is now selling, appears to have resulted from increased manufacture abroad, correspondingly large shipments to this country, and an unusually small consumption here during the past season. Since the price fell below $1.80, there has appeared a disposition on the part of retailers to purchase more than their immediate needs require. Should this become general, it may lead to a temporary rise, but the opinion is generally expressed that there will be no considerable advance for several months.

It seems to have been the importation of German quinine that has chiefly caused this remarkable decline, the price at which it has lately been sold in quantities having reached $1.65 and even lower.

Retail dealers who purchase a surplus stock of this article will do well to make use of the tests mentioned on page 276 of the new Pharmacopœia, as a means for assuring themselves of the purity of what they buy. The tests referred to are such as all pharmacists should be capable of applying.

Local Pharmaceutical Associations.

THE importance of local pharmaceutical associations in raising the standard of requirements in pharmaceutical education, in advancing the professional and trade interests of their members, and in developing among pharmacists generally a feeling of good-fellowship, is beginning to be well appreciated, and there is hardly a month when the organization of one or more such societies is not announced. Some time since, the editors of NEW REMEDIES foresaw the importance of this movement, and in aid of it commenced the publication of a monthly Pharmaceutical Calendar. Owing, however, to the rapid increase in the number of such societies, it has been difficult to keep pace with it, and through the neglect of the secretaries to inform us of the details of their organization, we have been unable to make the Calendar as complete as we desire. We now ask attention of such societies to the notice at the head of the Calendar on the last page of this number, and hope that an early compliance with our request may enable us to keep this department of the journal corrected up to the date of every issue.

A Model County Pharmaceutical Society.

THE Oswego (N. Y.) County Pharmaceutical Society appears to be a model for other organizations of like character. From a recent letter from the Secretary, Mr. E. W. Morse, we learn that, although organized but about one year, it already includes among its members all the retail pharmacists of the City and County; that it has adopted a price-list for all leading patent, proprietary, and pharmaceutical preparations; that there is no "cutting" in prices, and that all seem pleased with its working. In any case of ignorance, doubt, or dispute, the question is settled by the Executive Committee of the Society, and all members are notified.

Correction.

DR. A. B. LYONS, the author of the Alcoholometric Chart published by us in September, has called our attention to an error made by the draughtsman, in the column relating to specific gravity on the left hand side. From .800 (at the foot of the column) up to 90.1 the scale has been divided into six spaces, whereas it should have been divided so that five spaces occur between each number. On page 228, in the text relating to the table, seventh line of the paragraph next to the last, the equation $73.5+.0732$ should read $73.5 \times .0732$, etc.

[ORIGINAL COMMUNICATION.]

The Assay of Spirit of Nitrous Ether.

(Supplement to articles on pp. 139 and 306 of this volume.)

PROF. J. F. EYKMAN, of Tokio, Japan, has favored us with the following explanatory note, regarding the derivation of the formula

$$\frac{H-t}{273+t} \cdot 0.1207$$

in the formula, given on page 142 of this volume, for calculating the results of the analysis of spirit of nitrous ether, by his process.

(*Explanation of letters:* V represents the number of cubic centimeters (*cc.*) of gas read off, H the barometric pressure in millimeters (*mm.*), e the tension of aqueous vapor at the observed temperature, a the number of cubic centimeters of the spirit used for assay. and t the observed temperature.)

V (in *cc.*) of nitric oxide at 0° and 760 millimeters pressure weigh: $V \cdot \frac{0.0896}{1000} \cdot 15$ grams (15 being the spec. grav. of NO, if H = 1); or, in general terms:

V (in *cc.*) of nitric oxide at $t°$ and $H-e$ millimeters pressure weigh: $V \cdot \frac{0.0896}{1000} \cdot 15 \cdot \frac{H-e}{\left(1+\frac{t}{273}\right) \cdot 760}$ grams.

As V is the number of cubic centimeters of NO gas obtained by analysis from a cubic centimeters, or from $a \times S$ grams of the spirit (S being its spec. grav.), the percentage of NO contained in the spirit is:

$$\frac{V}{a \times S} \cdot 100 \cdot \frac{H-e}{\left(1+\frac{t}{273}\right) \cdot 760} \cdot \frac{0.0896}{1000} \cdot 15;$$ and as 30 parts (*i. e.*, the molecular weight) of NO correspond to 75 parts (*i. e.*, the molecular weight) of ethyl nitrite ($C_2H_5.O.NO$), the percentage of ethyl nitrite in the spirit is expressed by the formula:

$$\frac{V}{S \times a} \cdot 100 \cdot \frac{H-e}{\left(1+\frac{t}{273}\right) \cdot 760} \cdot \frac{0.0896}{1000} \cdot 15 \cdot \frac{75}{30},$$ which simplified gives:

$$\frac{V}{S \times a} \cdot \frac{H-e}{t+273} \cdot \frac{273}{260} \cdot 100 \times \frac{0.0896}{1000} \cdot 15 \cdot \frac{75}{30}, \text{ or}$$

$$\frac{V}{S \times a} \cdot \frac{H-e}{t+273} \cdot 0.1207.$$

In order to render the calculation of the results of the analysis still easier, and to avoid the difficulty of having at hand a table showing the vapor tension of water at different temperatures, the values of

$\frac{H-e}{273+t} \cdot 0.1207$ for a temperature (t) between 0° and 15° C., and for a pressure (H) between 750 and 772 millimeters have been calculated, and arranged in the table on page 306.

Although H indicates the *corrected* observed barometric pressure, in millimetres, still the uncorrected pressure might be substituted for this without incurring much error.

In the table of analyses given on page 142, second column, under No. 10, read 80.3 *cc.* instead of 48.2.

Small Doses of Iodide of Potassium in Frontal Headache.

DR. HALEY says (*Australian Medical Journal*, of Aug. 15th, 1881) that, as a rule, a dull, heavy headache, situated over the brows and accompanied by languor, chilliness, and a feeling of general discomfort, with distaste for food, which sometimes approaches to nausea, can be completely removed, in about ten minutes, by a two-grain dose of iodide of potassium dissolved in half a wineglassful of water, this being sipped so that the whole quantity may be consumed in about ten minutes.—*Glasgow Med. Journ.*

On Tincture of Rhubarb *

BY EDGAR CLARENCE MAXCY, PH.G.

THE great difficulty with this useful preparation is its tendency to precipitate on standing, which it not only does soon after its completion, but continues to do for an indefinite period after it once commences. This precipitate covers the bottom of the bottle or vessel containing it to a considerable depth, and is also clearly defined upon the sides of the containing vessel, making it almost impossible to dispense a clear, desirable-looking preparation.

That the tincture is injured medicinally as well as pharmaceutically, is quite evident from the fact that chrysophanic acid has been found in this precipitate, and to this acid, in part, rhubarb owes its therapeutic value. As a solvent for rhubarb, glycerin seems to be among the first, and its introduction into the menstruum is as essential as the alcohol, for, by so doing, a greater portion, if not all of this precipitation may be gotten rid of when a proper manipulation is observed. I first tried to make the tincture by using a menstruum of strong alcohol, as follows:

Rhubarb, in No. 40 powder	3.
Cardamom, in No. 40 powder	½.
Glycerin	1.
Alcohol (stronger)	2.
Diluted alcohol	q. s.

Moisten the powders with one fluid ounce of the mixture of alcohol and glycerin, and pack quite firmly in a conical percolator. When the liquid begins to drop, having previously poured the menstruum on the packed powders, cork the orifice for forty-eight hours, then remove the cork, allow the percolation to proceed, and reserve the first twelve ounces as finished product. Then continue the percolation with diluted alcohol until twenty fluid ounces are obtained. Evaporate the alcohol from the twenty fluid ounces until there remain four fluid ounces, and add this to the twelve fluid ounces first obtained.

To this pint of stronger product thus obtained gradually add distilled water, shaking slightly after each addition, until two pints of finished product result. Filtering this through gray, bibulous filter-paper, there results a clear, apparently excellent tincture. After standing four months and twenty-six days, I find a precipitate, but not a very dense one. The process seems to be quite an improvement over the U. S. Ph. [1870] process.

My next trial was a modification of a formula found in the *American Journal of Pharmacy*, using a strong alcoholic menstruum as below:

Rhubarb, in No. 40 powder	1½
Cardamom, in No. 40 powder	2
Glycerin (stronger)	2
Alcohol (stronger)	15
Diluted alcohol	q. s.

Moisten with one-half fluid ounce of the mixture of alcohol and glycerin, pack quite firmly in a glass funnel of suitable size, and pour on the menstruum; when it commences to drop from the outlet of the funnel, cork for forty-hours, and then allow it to percolate until six fluid ounces are obtained. Continue the percolation with diluted alcohol until ten fluid ounces result and evaporate to two fluid ounces, adding this last quantity to the six fluid ounces first obtained; then add distilled water in successive small portions until a pint is obtained, and filter. Allowing this to stand four months and twenty-six days, I obtained a tincture which was nearly as good as that produced in the former experiment, though not quite so satisfactory.

The third attempt to improve the tincture of rhubarb was made by modifying the officinal formula, so as to introduce enough glycerin to prevent precipitation to a very great extent:

* Extract from a thesis presented to the Massachusetts College of Pharmacy, 1881.

Rhubarb in No. 40 powder	℥ 1½
Cardamom in No. 40 powder	ʒ 2
Glycerin	ʒ 2
Alcohol (stronger)	℥ 8½
Water	℥ 6½
Diluted alcohol	q. s.

Mix the alcohol, water and glycerin, moisten the powders, as before, with one-half fluid ounce of this mixture, and after allowing to stand fourteen hours in a closed vessel (glass preferably), pass through a sieve of twenty meshes to the linear inch and pack quite firmly in a glass funnel. Pour on the menstruum, and when the liquid has passed through the powder to the mouth of the funnel, cork the outlet for five hours, and then continue the percolation with diluted alcohol until one pint of finished product is the result.

I find it unnecessary to filter this bright perfect preparation. This experiment, like the two preceding, has stood four months and twenty-six days, and is a great improvement.

My fourth and last trial was the same as preceding, with an increased amount of glycerin. The amount increased being one-half fluid ounce to the two pints of finished product, viz.:

Rhubarb in No. 40 powder	℥ 1½
Cardamom in No. 40 powder	ʒ ¼
Glycerin	℥ 2
Alcohol (stronger)	℥ 8
Water	℥ 3
Diluted alcohol	q. s.

I proceeded exactly as before, excepting that I allowed the powder to macerate in the funnel three hours longer—eight hours instead of five. The result is a beautiful, bright liquid, far surpassing that obtained by the officinal formula, and which I expect will not precipitate like the latter.

Some Experiments on English Oil of Lavender.*

BY W. A. SHENSTONE.

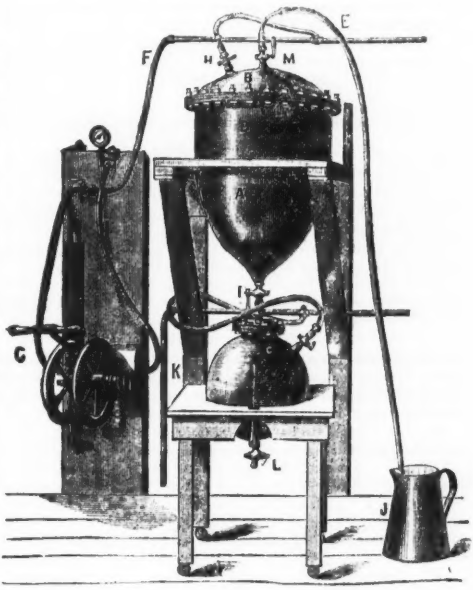
MR. SHENSTONE reports on some experiments which he made some time ago, to which some interest is given by the results published in 1879 by M. Bruylants, who had experimented with oil from the French lavender flowers. Mr. Bruylants obtained twenty-five per cent of a terpene boiling at 162° C. from this oil, and inferred the presence of camphor and borneol to the extent of sixty-five per cent. In his experiments with English oil of lavender Mr. Shenstone found that the quantity of terpene is much smaller; he obtained something less than one per cent of impure terpene after much labor, though no doubt the waste would be considerable. Mr. Shenstone found that the strongest freezing mixtures, such as solid carbon dioxide and ether, failed to cause the separation of the crystalline constituents which this oil has been supposed to contain, and also that concentration by distillation under reduced pressure, so as to avoid overheating, and subsequent examination of the residue, failed to give evidence of the presence of such substances. The constituents of higher boiling point were only incompletely examined. A portion boiling at about 200° C. was analyzed by Dr. G. H. Morris, and found to contain a large percentage of oxygen and was not therefore a hydrocarbon. The experiments of M. Bruylants and others decidedly seem to show that, after treatment with oxidizing agents, the higher boiling portions of lavender oil yield camphor; and the author is disposed to consider that the oil consists chiefly of one or more liquid oxygenated bodies from which this camphor is derived, mixed in the case of the French oil with a considerable percentage of terpene, and in the case of the English oil with a very much smaller quantity of terpene. The terpene obtained from the English oil had not the characteristic odor of lavender flowers.

* From a paper read at the Brit. Pharm. Conference. Abstract after *Chem. and Drugg.*

The Solubility of Boric Acid in Glycerin.*

BY DAVID HOOPER.

PROFESSOR BARFF'S "boro-glyceride," and still later the glyceroborate of calcium and the glyceroborate of sodium, described by M. Le Bon in the *Comptes Rendus* (xcv., 145) have created a demand for these antiseptics.† Mr. Hooper's experiments were directed to the elucidation of the solubility of the one substance in the other at various temperatures. Especial care was taken to insure absolute purity of the two substances. The result of a number of determinations showed a regular progression of solubility as the temperature was increased. Thus at 0° C. 100 of glycerin dissolve 20 of boric acid; at 25°, 30 parts; at 50°, 43 parts; at 75°, 58 parts, and at 100°, 72 parts.



The Manufacture of Fluid Extracts by Maceration and Displacement in Vacuo.

AT the last meeting of the Pennsylvania Pharmaceutical Association, Mr. W. M. Thomson, of Philadelphia, described an apparatus devised by him for avoiding loss of alcohol and volatile principles when manufacturing fluid extracts in large quantities. Other recommendations for the apparatus are a saving in time and reduction to a minimum of the labor required. The process described by him is as follows: The drug, having been reduced to a much finer condition than that usually employed, is dampened with a part of the menstruum, and firmly packed, by repeated pressure, into the percolator *A*. The cover *B* is then bolted on, and a vacuum produced in the upper part of the vessel by means of the air pump *G*. The stopcock *H* is now closed, and *M* opened, connecting with the tube *E*, through which the balance of the menstruum is drawn, and the whole allowed to macerate "in vacuo" for a sufficient length of time. The removal of atmospheric pressure, permitting the menstruum to descend more gradually and uniformly through the drug by its own specific gravity, produces also a vacuum in each individual cell, enabling the menstruum to penetrate more quickly and readily the interior, thus assisting its solvent action in

* From a paper read at the Brit. Pharm. Conference. Abstract after *Chem. and Drugg.*

† See this number of NEW REM., page 370.

more thoroughly dissolving out those principles soluble therein and at the same time removing all tendency to evaporation or oxidizing influence.

To start percolation, the air is withdrawn from the receiver *C*, the connecting tap *I* opened, and the saturated liquid begins to flow, and continues so long as the vacuum in the lower is greater than in the upper vessel. When this, however, becomes equalized, the tap *M* in the percolator *D* is opened to obtain the influence of atmospheric pressure and keep up the flow of liquid; and to assist this, air is forced into the upper chamber, by means of which the balance of the extract is effectually obtained.

The decided advantages gained by this method of procedure are of paramount importance when time, quantity of menstruum required, and, above all, quality of product is duly considered, the drug being thereby completely exhausted of its active principles and volatile essences unaltered, the resulting fluid extract tested by general appearance, characteristic taste and odor, more faithfully represents therapeutically the original drug than the productions of any other process at present known.

Notes on the Pharmacy of Cinchona.*

BY R. W. GILES.

THE author states as a fact well known and maintained by nearly all authorities, that it is next to impossible to obtain officially recognized cinchona of the official alkaloidal value; while there is no lack of barks of superior alkaloidal value, and equally well adapted to pharmaceutical purposes, which are not officially recognized.

The only dissentient is Mr. De Neufville, who asserted, in a paper read at the last conference, that the supply of flat calisaya, during the past few years, had been abundant, and the quality of quill calisaya had been good, but it did not follow that there had been an abundant supply of good calisya bark. The author agrees with Dr. Paul that an alteration is necessary in the range of selection of pharmaceutical barks; that the South American should not be excluded, but that Indian barks should be admitted; in other words, alkaloidal standard be the sole test.

It was maintained that it is owing to this deterioration of calisaya bark that cinchona has been so largely displaced by quinine, notwithstanding the opinion of the authorities upon the relative value of the two medicines.

English and foreign observers have declared that the febrifuge and antiperiodic action of cinchona is common to all its alkaloids, while the best writers upon therapeutics assert that cinchona possesses medicinal properties superior to those of any or all of its alkaloids.

In these days of practical science, brokers sell and quinine makers buy cinchona bark on the basis of its alkaloidal percentages ascertained by exact analysis. The pharmacist alone buys haphazard the "showy barks" often very poor in alkaloids, and hence known as "druggists' barks," which the quinine makers are only too happy to leave for him.

The very reverse ought to prevail. The pharmacist should secure the first choice by being willing to give a better price than the quinine-makers, who can only give the alkaloid value. The author has heard of a time-honored establishment buying several seroons of calisaya bark at 3*s.* 6*d.* per pound, which proved to contain not a particle of quinine, and only a very small amount of cinchonine. Its assay value certainly would not have exceeded 6*d.* This is a sort of bark which should be left for the stores, whom it would exactly suit, and where no questions are asked.

The author advocates, therefore, that an *alkaloidal*, not a quinine standard should be adopted for barks, and that cinchona from any source should be admitted.†

He suggested that a five per cent standard should be adopted as a fair average. The process for assaying the bark recommended by Mr. Giles was based on the recommendation of Dr. de Vrij, as follows: To 25 grains finely powdered cinchona bark add 2.5 *cc.* strong hydrochloric acid in 30 *cc.* distilled water, or sufficient to moisten the bark; set by for two hours, add 100 *cc.* distilled water and let stand for twelve hours or more, stirring occasionally, until all foam disappears from the surface. Pour into a cylindrical glass percolator, the mouth of which has been stopped by a pinch of charpie loosely dropped into it and moistened with a little water, and recover the clear percolate. Pour on more water until the percolate ceases to be precipitated by caustic soda. The percolate will measure 200 to 300 *cc.* Precipitate with caustic soda in considerable exces. After twelve hours, the alkaloids have settled in a compact stratum, from which nearly the whole of the supernatant liquid may be decanted. The precipitate carefully dried and weighed, should not be less than 1.25 grains to represent five per cent. The quantity of alkaloid remaining in the mother liquid may be estimated at 0.05 grams in 100 *cc.*

Concerning the cinchona preparations, the author says it is notorious that they do not meet the demands of modern medical practice. Cinchona won its reputation by administration in the form of powder; it has lost it by the substitution of inferior preparations of inferior bark. The tincture, decoction, and infusion of former generations have had their day and are becoming obsolete, never again to find favor with prescribers, pharmacists, or patients.* They are all too feeble in alkaloids for administration when the specific effects of cinchona are in question.

Fluid extracts are the pharmaceutical preparations of the day; but a fluid extract of cinchona, worthy of its name, is still a desideratum in pharmacy.

* From a paper read at the Brit. Pharm. Conference. Abstract after *Chem. and Drugg.*

† This has been done already in the new U. S. Pharmacopœia, in which *Cinchona* is defined as "The bark of any species of cinchona, containing at least three per cent of its peculiar alkaloids."—ED. N. R.

* This is not quite the case, at least so far as regards the tincture, in this country.—ED. N. R.

New Methods for Preparing Oxygen and Hydrogen on a Large Scale.

THE following new processes have been patented by Hélouis:

1. *Hydrogen.*—Wood is distilled in retorts, in the usual manner; the escaping gases being used for heating the retorts, the tar for carburizing the hydrogen subsequently produced, and the wood-vinegar for the manufacture of acetate of sodium. There remains, finally, a charcoal, which is exposed, while ignited, to a current of steam, whereby a mixture of hydrogen, carbonic oxide, and carbonic acid gas is produced. This mixture is conducted over red-hot sulphate of calcium, whereby sulphide of calcium is formed, and the carbonic oxide is also converted to carbonic acid; so that, finally, the gaseous mixture contains only the last-named gas together with hydrogen. This mixture is then conducted through a solution of soda, by which the carbonic acid is absorbed, and pure hydrogen escapes. The solution of carbonate of sodium is utilized in making the acetate of sodium.

2. *Oxygen.*—Six hundred parts of gypsum (sulphate of calcium) and three hundred and forty parts of silicic acid, in form of river-sand, are mixed, heated to redness in retorts, and superheated steam passed over the mixture. The escaping gases, consisting of oxygen and sulphurous acid, are conducted through a solution of soda, whereby sulphite of sodium is formed, while oxygen passes on and, after being washed in milk of lime, is collected in a gasometer.

A less pure oxygen, or rather a highly oxygenated air—containing seventy-five per cent of oxygen—may be obtained for technical purposes, by causing air to be absorbed, under a pressure of ten atmospheres, by a mixture of eighty parts of water and twenty parts of glycerin. This mixture absorbs more oxygen than nitrogen, and gives off this oxygenated air on removing the pressure. By repeating the operation a few times, the proportion of oxygen may be raised to seventy-five per cent.—*Neueste Erfind. und Erfahr.*

Vaporizer for Disinfecting or Perfuming Air.

HERETOFORE it has been mostly the custom, when it is wished to volatilize a disinfecting or odorous substance, either to add it to water kept in constant ebullition, to make use of a steam atomizer, or to vaporize it by means of the heat of a burning pastille or hot coals. The former method is not always effectual, since the substance employed is not always volatile in the same degree as boiling water. The latter, by too great heat, may change the character of the substance volatilized, and the second method has come more largely into use; the spray apparatus used in Lister's method being an example. The defect of the latter is that the spray is thrown in one direction only, and that the effect of the vapor on the whole body of air in a room is correspondingly slow. In the

Steam Vaporizer.

apparatus here shown, the spray is thrown horizontally in every direction.

The basin holding the solution to be vaporized has a central tube allowing the free passage of a smaller tube coming from a boiler beneath. This latter tube is provided with two revolving branches, to which are attached tubes for conducting the fluid to be vaporized. The inner ends of the latter tubes are bent at a right angle, and dip below the level of the fluid in the basin; their outer extremities being drawn to a fine opening, and so adjusted to the opening of the steam jets, that the latter aspirates the fluid in the basin, blows it into a fine spray, and at the same time imparts to the tubes a rotary motion like that of a rotary nozzle of a fountain.

The Action of Iodine on Rattlesnake Poison.

BY HENRY H. CROFT.

SOME time since, in a paper to which I am unfortunately unable to refer, a French chemist affirmed that the poisonous principle in snakes, or eliminated by snakes, was of the nature of an alkaloid, and gave a name to this class of bodies.

Mr. Pedler has shown that snake poison is destroyed or neutralized by means of platinic chloride, owing, probably, to the formation of an insoluble double platinic chloride, such as is formed with almost, if not all, alkaloids. In this country (Texas), where rattlesnakes are very common, and persons camping out much exposed to their bites, a very favorable antidote or *remedia*, as the Mexicans call it, is a strong solution of iodine in potassium iodide.* I have had occasion to prove the efficacy of this mixture in two cases of *Cascabel* bites, one on a buck, the other on a dog, and it occurred to me that the same explanation of its action might be given as above for the platinum salt, viz., the formation of an insoluble iodo-compound, as with ordinary alkaloids, if the snake poison belongs to this class.

Having, last evening, killed a moderate sized rattlesnake—*Crotalus horridus*—which had not bitten anything, I found the gland fully charged with the white, opaque poison; on adding iodine solution to a drop of this, a dense, light-brown precipitate was immediately formed, quite similar to that obtained with most alkaloids, exhibiting under the microscope crystalline structure.

In the absence of iodine, a good extemporaneous solution for testing alkaloids, and perhaps as snake-poison antidote, may be made by adding a few drops of ferric chloride to solution of potassium iodide; this is a very convenient agent which I used in my laboratory for many years.

Although rattlesnake poison could be obtained here in very considerable quantity, it is out of my power to make such experiments as I could desire, being without any chemical appliances, and living a hundred miles or more from any laboratory.

The same may be said with regard to books, and possibly the above iodine reaction has been already described.

Dr. Richards states that the *cobra* poison is destroyed by potassium permanganate; but this is no argument in favor of that salt as an antidote. Mr. Pedler also refers to it, but allows that it would not be probably of any use after the poison had been absorbed. Of this I think there can be no doubt, remembering the easy decomposition of permanganate by most organic substances, and I cannot but think that the medical or therapeutic advantages of that salt, taken internally, are equally problematical, unless the action is supposed to take place in the stomach. In the bladder of the same rattlesnake I found a considerable quantity of light-brown amorphous ammonium urate, the urine pale-yellow.

Hermanitas Ranch. 35 San Diego, Duva Co., Texas, U. S., August 22d, 1882.—*Chem. News.*

Snake Bite—Rapid Cure by Carbolic Acid.

DR. SEREINS relates a case of snake bite treated successfully by hypodermic injections of carbolic acid. The patient, a charwoman, forty years of age, was bitten by a venomous snake on the left foot just below the external malleolus. Half an hour afterward she experienced an intense smarting at the point of the injury and a sensation of constriction in the abdomen and epigastric region. Soon she began to throw off quantities of glairy mucus and bile.

The vomiting was almost incessant, and each was preceded by a painful aura starting from the wound, passing up the limb, and radiating toward the stomach. A tourniquet was applied to the limb, and the wound covered with a compress dipped in a solution of ammonia. Dr. Sereins arrived two hours after the woman had been bitten, and found her vomiting and suffering from a sense of impending suffocation. The skin was cold and covered with perspiration, the pulse feeble and beating 110 to the minute; on the external surface of the foot, just below the malleolus, were two little red points, and above them, a small blister caused by the ammonia.

The lower part of the leg was enormously swollen, the skin marbled, with here and there yellowish spots and points of ecchymosis, surrounded by small vesicles. The patient complained bitterly of cold. Four hypodermics of a solution of carbolic acid in glycerin (two in fifteen) were given, one in the neighborhood of the bite, and three at

* The solution is applied as soon as possible to the wound, preferably enlarged, and a few drops taken internally. The common Mexican *remedia* is the root of the *Agave virginica*, mashed or chewed and applied to the wound, while part is swallowed. Great faith is placed in the root by all residents here, who are seldom without it, but I have had no experience of it myself, and the internal administration is no doubt useless.

Even the wild birds know of this root; the queer Paisano (? Ground woodpecker) which eats snakes, when wounded by a *vibora de cascabel* runs into the woods, digs up and eats a root of the Agave, just like the mongoose, but more than that, goes back, polishes off his enemy and eats him. This has been told me by Mexicans who, it may be remarked, are not always reliable.

the upper edge of the œdematous part of the leg. The wound was also bathed with the same solution. In one hour there was a very appreciable reduction of the swelling, the vomiting became less persistent, and ceased entirely in four hours. The next day the constricting ligature was removed from the leg. On the second day, the patient had entirely recovered; there was but slight swelling of the leg, and the yellow spots and ecchymosis had disappeared. The case seems remarkable in the rapidity of the cure effected.

Few accidents of this kind are ever recovered from (if at all) short of a fortnight. Then, the woman was not seen until two hours had elapsed after the wound was inflicted. The nervous centres were profoundly affected, as evidenced by the symptoms. Thus the carbolic acid not only destroyed the venom at the point of introduction, but even neutralized its effects in the general system.—*L'Union Médicale.*

Pilocarpine in Diphtheria.

In the *Boston Medical and Surgical Journal* for October 26th is a summary of the recent reports upon the use of pilocarpine in diphtheria. From this we learn that Dr. Paynardeau finds that its use leads to an early detachment of false membrane (especially serviceable in membranes located in inaccessible places); but, on the other hand, it is apt in some cases to cause violent vomiting, diarrhœa, and collapse, conditions to be avoided in a disease like this, where cardiac weakness is a constant factor.

Dr. Tayac not only recommends it for the reasons first mentioned above, but thinks that its use is oftentimes followed by improvement in the general condition of the patient, and that its early administration may abort the disease. [Query. How many of the cases were simply follicular pharyngitis?—Ed. New Rem.]

Demme gives the remedy hypodermically.

Lepidi-Chioti gives it as an enema, three centigrams (about one-half grain) in two ounces of fluid.

M. Archambault reports twenty-one cases of diphtheria, of which twelve died. The nine cases which recovered were not severe ones. His conclusions are:

"(1.) That no case was cured which seemed to show clearly any positive, and at the same time unusual, efficiency in the treatment.

"(2.) That in many cases the remedy acted unfavorably by causing great depression without any compensatory amelioration in other symptoms of the disease.

"(3.) That in the cases which ended in recovery the membrane did seem to be loosened and more readily removed than in cases in which salivation was not induced; but that this greater facility of removal by salivation did not seem sufficiently advantageous to outweigh the other depressing effects of the treatment.

"(4.) That in the severe cases a new membrane was deposited on the surfaces from which old patches had recently separated, in spite of the fact that salivation was being kept up by the use of pilocarpine; and therefore that the treatment did not prevent the continued formation of membrane."

In general, the author is inclined to infer from his observations that the treatment of diphtheria with pilocarpine is not followed by good effects, and that its advantages are outweighed by its disadvantages.

Chinoline in Diphtheria.

Dr. Otto Seifert has used the following as a topical remedy in diphtheria:

Chinoline	1 gram.	(gr. xv.)
Distilled water	500 "	(O.i.)
Alcohol	50 "	(℥ i.) M.
Oil of peppermint	gtt. ij	

He uses it as a gargle and also applies by means of a brush or swab a solution of equal parts of water and alcohol with five parts of pure chinoline in solution. He thinks that it loosens the membrane in from twelve to twenty-four hours, and that the glandular swellings subside and the temperature is reduced more quickly than under other treatment.

Report on the Differences Between the Essential Oils of Cinnamon and Cassia.*

BY A. H. JACKSON, B.SC., PH.C.

The oils were distilled by Mr. Umney from carefully selected samples of bark. In both cases the barks practically yielded one-half per cent of oil on distillation.

The author aimed to treat both oils in a similar way, in the hope of separating some product from the one that is either not contained in the other, or is contained in a different proportion.

In taste, cinnamon was found more fiery than cassia. Authorities differ as to the effects on polarized light, which, however, appears to be very slight in either case. The author fixes the density of oil of cassia at 1.0366 and that of oil of cinnamon at 1.0097 in vacuo and compared with water at its maximum density.

Experiments on the refractive energy of the two oils were also conducted, but it was inferred that neither the relative densities nor the refractive energies are sufficient guides in distinguishing mixtures of these oils.

A very careful chemical examination was recorded, the result of which was to show that the oils consist chiefly of cinnamaldehyde, together with small quantities of cinnamic acids, resins, and unexamined hydrocarbons. The acid and resins are probably due to oxidation of the oil, as they increase in amount with age and exposure. By fractional distillation, and by treatment of the oils with a saturated solution of potassium bisulphite, so as to take up the cinnamaldehyde, and filtering the residue, some residue was obtained. In this it is supposed any points of difference exist, but only very small quantities are left for investigation.

Permanganate of Potassium in Gonorrhœa.

The use of an injection of solution of permanganate of potassium is said to be popular with Vienna physicians, just now, in the treatment of gonorrhœa, but Prof. Zeissl considers that the use of too strong solutions has been the cause of stricture. He says that in many cases the sixth of a grain in two ounces of water will be curative.

The Purity of Commercial Salts of Gold.†

BY F. W. BRANSON.

The author had examined twelve samples of chloride of gold sold in fifteen-grain tubes. These were the products of four manufacturers.

The products of *A* (four samples) averaged 14.957 grains in each; those of *B* (two samples) 15.146 grains each; those of *C* (two samples) 15.058 grains each; those of *D* (four samples) 13.749 grains each.

The gold was precipitated by oxalic acid (25 *cc.* of the standard solution being found sufficient for each tube). The complete precipitation in each experiment occupied ninety-six hours. The following averages of pure gold resulted: *A*, 7.286 grains; *B*, 7.215 grains; *C*, 7.317 grains; *D*, 6.654 grains.

The author had not had time for the complete examination of the residues from the evaporation and incineration of the oxalic acid solution, from which the gold had been precipitated.

He reserves them for subsequent analysis, but states in round numbers that *A* and *B* yielded more than ten per cent, while *C* and *D* yielded less than one per cent of ash.

No metals precipitated by hydrosulphuric acid or sulphide of ammonium were found. The samples were obtained from firms most likely to supply the requirements of pharmacists, foreign samples being purposely excluded.

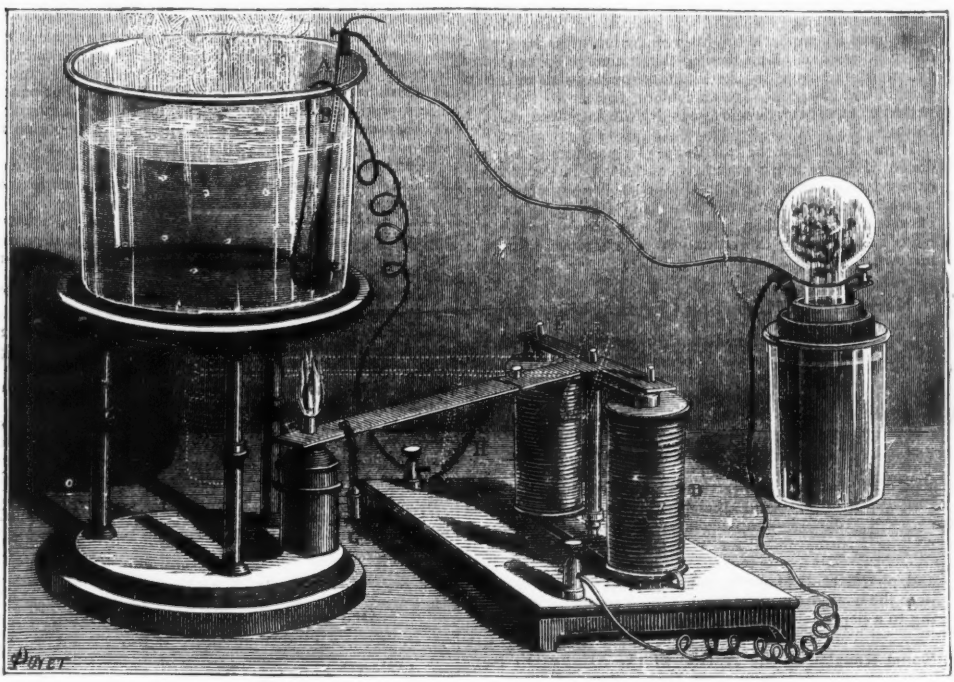
The products of *A*, *B*, and *C* all bore trade-marks, seller's name, and guarantee label; those of *D* did not, but were said to be obtained from a firm possessing the confidence of the trade.

* From a paper read before the Brit. Pharm. Conference. Abstract after *Chem. and Drugg.*

† From a paper read at the Brit. Pharm. Conference. Abstract after *Chem. and Drugg.*

Alarming Symptoms from Eight Grains of Potassium Iodide.

DR. J. R. WEST reports in the *American Practitioner* a case in which a woman of twenty-eight years took eight grains of iodide of potassium with sugar and water, and in less than one hour began to suffer from disagreeable symptoms, after three hours she had a pulse of 60, temperature of 95° F., pallor of the face, slight general œdema, but marked œdema of face and upper eyelids, abundant secretion of viscid saliva, occlusion of nasal passages from swelling of mucous membrane. The lips tongue and palate swollen, nausea, pain in abdomen, dyspnœa and aphonia from laryngeal œdema. Respiration was improved by morphia and hypodermically, and at the end of twenty-four hour hours the symptoms continued in a mitigated degree. In seventy-two hours the patient had recovered. Subsequently she was given one grain of the iodide as an experiment, and she had a return of the same symptoms, but in a milder form.



Regnard's Heat Regulator.

An Automatic Heat Regulator.

ONE of the unsolved problems of the day is the perfect regulation of the supply of heat by some automatic arrangement. Dr. Regnard describes in *La Nature* a method which he has had in use for some time, and which he claims, works regularly and with extreme sensitiveness. Into a water-bath there dips an electric thermometer, that is a thermometer open at the top, into whose tube runs a very fine platinum wire, which may be raised or lowered, or fixed definitely before any degree whatever of the scale. The mercury in the thermometer bulb communicates, through a wire soldered into the glass, with a Leclanche or Daniell pile. Since the upper platinum wire is in connection with the other pole as soon as the mercury, by dilatation, touches the latter, the current will be closed. Interposed in this current there is an electro-magnet, whose armature, provided with a long lever, carries a benzine lamp. When no current is passing the lamp is placed under the stove, but as soon as the current begins, the armature of the electro-magnet is attracted and the lamp is removed to a distance. The thermometer, becoming cool almost instantly, causes the mercurial column to leave the platinum wire. As soon as the current is broken, the electro-magnet becomes inactive, and a spring draws the lamp back beneath the stove, and so on.

It will be seen, says Dr. Regnard, that the temperature of the stove cannot vary, since, as soon as it rises, the source of heat is removed; and as soon as it lowers, the source of heat is replaced. This stove has the further advantage of being instantly regulated at any desired temperature; to effect which it is only necessary to fix the platinum wire opposite the degree that it is desired to have. After that it will be always at such degree that the current will be closed and the lamp removed from beneath the stove.

Oil of Peppermint in Neuralgia.

DR. MEREDITH, in the *Birmingham Medical Review*, recommends oil of peppermint as an external application for allaying the neuralgic pain so often complained of in cases of herpes zoster. He has used it with great relief to the patient, even when the eruption was in a fresh, florid condition. He thinks that the value of this remedy in relieving neuralgic pain deserves to be better known.

[This remedy is by no means novel, since it has been employed for many generations, at least in China and Japan. Now and then small vials of green glass, holding a few drops of Chinese Peppermint-oil, are to be had in stores where oriental goods are sold, and many persons who have bought them for the relief of headache and neuralgia certify to the rapid relief which follows the drawing of a needle, wet with the oil, across the forehead or the painful spot.—ED. N. R.]

Note on the Action of Glycerin on some Salts of Iron.*

BY G. F. SCHACHT.

MR. SHENSTONE had given to the author the remains of a mixture that had been dispensed for him from the following prescription:

Tr. ferri perchlor.	℥ iss.
Glycerini	℥ vi.
Aquæ ad	℥ vi.

M.

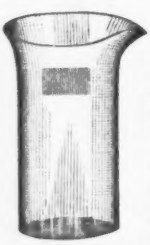
The mixture, when first prepared, was of a pale sherry color, and possessed an astringent metallic taste. When received by Mr. Schacht, the color had almost disappeared, and the taste was sweet and metallic, but not astringent.

The application of ferricyanide of potassium and of sulphocyanide of potassium showed that the iron had been reduced from the ferric to the ferrous condition to a very considerable extent, but not to the complete reduction of perchloride

On preparing the mixture, it was found that the tincture of perchloride of iron taken from the ordinary dispensing-bottle was no longer what it was when originally mixed, for it gave an emphatic bright-green color with ferricyanide of potassium. This showed that a change in the condition of the iron in the tincture made with ordinary alcohol had commenced to take place, similar to that suspected to have been developed under the influence of glycerin.

It was found that the iron in the mixture was slowly reduced if kept under ordinary conditions, but rapidly if exposed to direct sunlight. Under similar circumstances alcohol reduced the iron the same as glycerin. By another experiment the author proved that glycerin had some effect in preventing the oxidation of a ferrous salt in a mixture.

Novel Mode of Labelling Chemical Glassware.



DR. ROB. MUENCKE, the well-known maker of chemical glassware, proposes as an improvement in beaker glasses, the roughening of a surface upon one side (as shown in the illustration) by grinding, so that it can be written upon with a led-pencil.

Since the carbon of the pencil-mark is practically indestructible by acids and alkalies, it seems to us that this simple measure might well be resorted to for reagent bottles, flasks, and many other vessels used in chemical and pharmaceutical work, thus enabling the operator to note the contents or uses of any glass-vessel without resorting to a paper label.

Some Results of the Action of the Digestive Ferments upon Drugs.*

BY GEORGE BROWNEN, F.C.S.

THE purpose of this paper was to call attention to some of the results of the action of solutions of the digestive ferments upon medicinal substances.

Solutions of the gastric ferment were obtained from the stomach of the pig, by means of dilute glycerin and also with acidulated water and alcohol. Pancreatic solutions were also obtained from the pancreas of the pig by means of glycerin and a feebly alkaline, as well as an acidulated dilute alcohol. The first series of experiments was made with these solutions and crude drugs, the second with definite principles. An infusion of rhubarb, one-half ounce to the pint of water, at 50° C. was acted upon by some of the acid solution of pepsin for two hours; forty-seven per cent of the rhubarb was thus rendered soluble. The mixture was neutralized by sodium carbonate, the alkaline solution of pancreatin added, and the temperature sustained for two hours longer. The insoluble portion was then found to consist of cellulose and earthy salts, retaining a small quantity of coloring matter. The two hundred and forty grains of rhubarb left an insoluble residue of ninety-six grains.

A similar process applied to calumba left an insoluble residue of one hundred and seventy-two grains out of five hundred grains of the drug.

Cinchona was about half soluble (forty-eight per cent), and opium about two-thirds, or sixty-eight per cent; but in each case the alkaloids were only partially dissolved. The cinchona-tannin was destroyed in the digestive process and failed to precipitate gelatins.

Some experiments with gum-arabic suggested that arabin of gum acacia remained unaffected by the processes, and that such peptonizing change, as was effected, was wrought upon some slight impurity of gum, possibly containing nitrogen.

Other experiments were made upon some definite substances. The acidulated extract of the gastric juice decomposed a watery solution of salicin very slowly and imperfectly; saliretin was formed, but associated with undecomposed salicin. On the other hand, the pancreatic ferment split up the salicin into saligenin and glucose. Jalapin was unaffected by the pepsin solution, but pancreatic digestion withdrew a copper-reducing substance from it. Santonin was unaffected by gastric and pancreatic solutions.

A solution of tannin with the acid pepsin solution became turbid, but the turbidity disappeared when a little more hydrochloric acid was added to the mixture.

The results of several hours' digestion were, however, negative, but the pancreatic ferment rendered the tannic acid incapable of precipitating gelatin or isinglass, because of the transformation into gallic acid.

The digestive process seems to consist of the hydration or splitting up of insolubles, and the author considers the microzymous or bacteroidal fermentation need not occur until the primary digestion is in an advanced stage. The emulsive ferment, as well as the proteolytic in action, produces acidity, although in the emulsification of fat the acidity is generally very slight and insufficient, by itself, to account for the minute subdivision of large proportions of fat. In the digestion of proteids, the acidulous body is glutannic acid, which may also occur in the emulsification of fats, as the author has never been able to find fatty acid and glycerin as separate bodies in emulsified fats in such quantity as would justify him in ascribing emulsification of fat to their formation and presence.

* From a paper read at the Brit. Pharm. Conference. Abstract after *Chem. and Drugg.*

[ORIGINAL COMMUNICATION.]

Deodorized Cod-liver Oil with Iron.

Take of

Cod-liver oil	1	pint.	
Sulphate of iron, dried	64	grains.	
Castile soap, powdered	128	"	
Charcoal, powdered	1	ounce.	
Coffee, ground	½	"	Or
Chocolate, powdered	¼	"	
Hot water	q. s.		

Dissolve the sulphate of iron and Castile soap, each separately in a sufficient quantity of hot water, mix the two solutions, and, after washing the resulting precipitate (oleate of iron) with water, triturate the oleate in a mortar with the cod-liver oil (previously heated in a water-bath) gradually added; then add the remaining ingredients, subject the whole to a water-bath for an hour, and filter, while hot, through paper or flannel.

The oleate of iron, which each tablespoonful of this preparation contains, is equivalent to nearly one grain of the sulphate of iron. To increase the quantity of iron in the above formula, twice the amount of the sulphate and soap may be used; the preparation would then contain

oleate of iron equivalent to nearly eight grains of sulphate of iron to the fluid ounce, or one grain to a teaspoonful, the latter modification being adapted to the administration of small doses of the oil.

The preparation has a dark-brown, almost transparent appearance, the oleate of iron combining readily with the warm oil. It contains only a faint odor of cod-liver oil, the charcoal assisting as a deodorizing agent, and the chocolate or coffee adding flavor to the same. It has the advantage of being acceptable to persons who would reject the oil in its unmodified form. W. A. HENRY.

FORT MOJAVE, A. T.,
Oct. 6th, 1882.

Selections from the Non-officinal Formulary of the Dutch Society for the Advancement of Pharmacy.*

[Continued from page 328.]

Zinci Bromidum. Bromide of Zinc.

	Parts.
Potassium bromide	24
Zinc sulphate	29

Rub them together in a mortar, until the mixture becomes liquid, and let it stand half an hour. Then treat the mixture with one hundred parts of strong alcohol, filter, and evaporate; first, on the water-bath, and afterwards, under continued stirring, to dryness, being careful not to use more heat than necessary.

It forms a white salt, completely soluble in water, strong alcohol, and ether. When heated, it is completely volatilized.

Carbo Sanguinis. Blood Charcoal.

Evaporate any convenient quantity of ox-blood, upon the water-bath, to dryness. Divide the residue into pieces, and heat them, in a covered vessel, until no more combustible gases are given off.

Reduce the charcoal to powder, and keep it in a well-stopped bottle.

Charta Resinosa. Antirheumatic Paper.

	Parts.
Pitch	3
Turpentine	3
Yellow wax	2
Resin	5

Melt the pitch, resin, and turpentine on a water-bath, add the wax, and strain the melted mass through linen. Then apply it to sized paper, coating the latter on one side only.

Clysma e Carne Cruda. Raw Beef Injection.

	Parts.
Beef	3
Pancreas (of ox or pig)	1

Chop them very fine, and mix them with warm water having a temperature not exceeding 40° C., or 104° F., to a thin magma.

Collodium Iodoformatum. Iodoform Collodion.

	Parts.
Iodoform	1
Flexible collodion	15

To the iodoform, reduced to a fine powder, and contained in a bottle, add the collodion, close the bottle well, and shake until the iodoform is dissolved.

Collodium Stypticum. Styptic Collodion.

	Parts.
Tannic acid	2
Alcohol (strong)	5
Collodion	20
Tincture of benzoin	2

Dissolve the tannic acid in the alcohol, and then add the other ingredients.

Conditum e Carne Cruda. Raw Meat Preserve.

	Parts.
Fresh beef	48
Sugar	32
Citric acid	1
Water	8

Reduce the beef to very fine shreds, and mix it with the sugar; then gradually add the citric acid, previously dissolved in the water. Pass the mixture through a horse-hair sieve, transfer the resulting mass into a pot, cover it with paper, and sprinkle sugar over it.

This preserve should be prepared fresh when wanted for use.

Decoctum Aperiens Laxans. Laxative (Aperient) Decoction.

	Parts.
Couch-grass, cut	12
Tamarind	8
Senna	1
Manna	4
Sulphate of potassium	1
Syrup of elder	4
Water	q. s.

Boil the couch-grass with water, so as to obtain 48 parts of decoction. Then strain and add to it the tamarind, senna, and manna. Let the mixture stand, well covered for fifteen minutes, then strain again, dissolve in it the sulphate of potassium, and add the syrup.

Electuarium Anthelminticum. Worm-Electuary.

	Parts.
Levant worm-seed, powdered	4
Valerian, powdered	2
Jalap, powdered	1
Sulphate of potassium, powdered	1
Honey of squill	24

Mix them.

Emplastrum Rustingii. Rusting's Plaster.

	Parts.
Lead-plaster	250
Yellow wax	30
Galbanum	6
Aloes	5
Ammoniac	8
Olibanum	30
Myrrh	8
Camphor	12
Olive oil	8

Melt together the lead-plaster and yellow wax. To the half-cooled mass add, under constant stirring, the other ingredients (the camphor being previously dissolved in the olive oil). Lastly stir the mass until cold, and keep it in a dark place.

Extractum Malti cum Quinina. Extract of Malt with Quinine.

	Parts.
Extract of malt	195
Hydrochlorate of quinine	1
Glycerin	4

Dissolve the hydrochlorate of quinine in the glycerin, and mix it with the extract of malt.

This preparation should be freshly made when wanted for use.

Extractum Malti cum Ferri Iodido. Extract of Malt with Iodide of Iron.

	Parts.
Extract of malt	96
Solution of iodide of iron	4

Mix them.

The solution of iodide of iron is prepared by bringing together 3 parts of iron with 8 parts of iodine, and enough water to make 40 parts, when the reaction is completed and the liquid filtered. Twenty parts of this solution contain 5 parts of ferrous iodide.

* See original title in our January number, page 10.

This preparation should be freshly made when wanted for use.

Extractum Malti Ferratum. Ferrated Extract of Malt.

	Parts.
Extract of malt	95
Soluble pyrophosphate of iron	2
Distilled water	3

Mix them.

This preparation should be freshly made when wanted for use.

Cetraria Saccharata. Irish Moss Sugar.
["Carrageen Saccharatus."]

	Parts.
Irish moss	25
Sugar	100
Water	q. s.

Boil the Irish moss for half an hour with a sufficient quantity of water; strain with gentle pressure, and dissolve the sugar in the strained liquid after it has become clear. Evaporate the solution on the water-bath, under constant stirring, until the residue can be reduced to a fine powder, which must be kept in a well-stoppered bottle.

Gelatina Cetrariæ. Irish Moss Jelly.

	Parts.
Irish moss sugar	25
Sugar	8
Water	65
Orange-flower water	2

Make a solution of the first three ingredients, on the water-bath, and add the orange-flower water. Then expose the mixture in a cool place until it congeals to a jelly.

Gelatina Chondri. Iceland Moss Sugar.
["Gelatina Lichenis Islandici."]

	Parts.
Iceland Moss sugar	30
Sugar	18
Water	50
Orange-flower water	2

Proceed as in the preceding case.

Glycerinum Iodatum. Iodized Glycerin.
["Glycerinum cum Iodo."]

	Parts.
Iodine	1
Glycerin	100

Dissolve the iodine, reduce to a fine powder, in the glycerin, with the aid of a gentle heat.

Pilulæ Ferri Bromidi. Pills of Bromide of Iron.

	Parts.
Iron, in powder	8
Bromine	10
Distilled water	15
Sugar of milk	6
Dropwort, powdered (Spiræa Filipendula)	10
Marsh-mallow, powdered	10

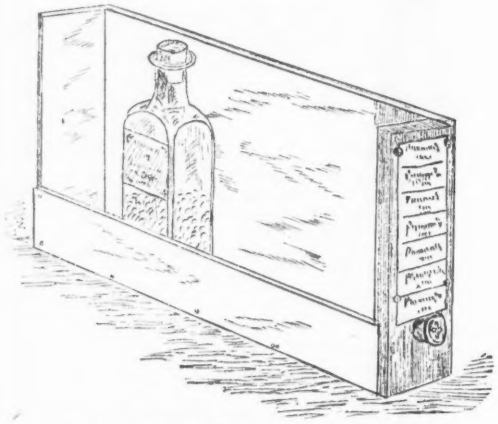
To the iron and distilled water, contained in a mortar add the bromine drop by drop, and stir the mixture constantly until the brown color and the odor of bromine has disappeared. Then add to it the other ingredients, and make the mass into pills, weighing 0.2 *gm.* (or 3 grains) each.

Sprinkle the pills with powdered iron, and coat them with a solution of balsam of Tolu in ether.

Copying Paper.

THE following is communicated to the *Polytechn. Notizblatt*, by E. Dieterich, in regard to the method he employs for making the copying paper which has obtained so good a reputation in Germany. The manufacture may be divided into two parts, viz., the production of the color, and the application of the same to the paper. For blue paper, Dieterich uses exclusively the blue color known as "Paris blue," as covering better than any other mineral color. Ten kilograms of this color are coarsely powdered, and mixed with 20 kilograms of ordinary olive oil; 0.25 kilograms of glycerin is then added. This mixture is for a week exposed in a drying room to a temperature of 40° to 50° C., and then ground as fine as possible in a paint mill. The glycerin softens the hard paint, and tends to make it easily diffusible. Half a kilogram of yellow wax is then melted with 7.5 kilograms of ligroine (a hydrocarbon from petroleum, constituting one of the low-boiling fractions); to this are added 3 kilograms of the blue mixture, and the whole is slowly mixed at a temperature of 30° or 40° C.

The mass is now of the consistence of honey. It is applied to the paper with a coarse brush, and afterwards evenly divided and polished with a badger's-hair brush. The sheets are then dried on a table heated by steam. This is done in a few minutes, and the paper is then ready for shipment. The quantities mentioned will be sufficient for about one thousand sheets of fifty by ninety centimeters, being a day's work for two girls. For black paper, aniline black is used in the same proportion. The operation must be carried on in well ventilated rooms, protected from fire, on account of the combustibility of the material and the narcotic effects of the ligroine. The paper is used between two sheets of paper, the upper one receiving the original, the lower the copy.



A Novel Mode of Storing Packages.

MR. S. A. D. SHEPPARD, of Boston, has shown us an ingenious contrivance for keeping an assortment of similar preparations of different manufacturers so that they are protected from dust and light, are convenient for access, and at the same time occupy as little room as is consistent with their actual bulk. As will be seen in the above illustration, the contrivance consists of a drawer, high enough to fill the space between two shelves, and just wide enough to hold the bottles or packages to be kept in it. One side of the drawer is made of the same height as the front, but the other is so narrow that when the drawer is taken from its place on the shelf, the labels of the bottles can be distinctly seen. The bottom of the drawer is about one-fourth of an inch above the bottom edge of the sides, and the rear end is shortened to a corresponding degree, so that it will admit of sliding the drawer over a single cleat of wood, tacked to the under shelf, and thus keep the drawer in its proper place. A card, with the names of the various articles kept in the drawer, is attached to its front by means of four brass-headed nails, which permit the card to be slipped in between them, their heads overlapping the edges of the card, and a knob, screwed into the drawer, serves to prevent the card from dropping through, and to take the drawer from its place on the shelf. A series of boxes of this description can be made cheaply by any carpenter, and will be found very convenient in disposing of the multitude of small packages of similar preparations kept by every retail druggist.

A New Form of Pipette.

MR. ARTHUR MEYER describes, in the *Archiv der Pharmacie*, July, 1882, p. 524, a new form of pipette, such as is at present frequently in use for removing layers of ether or amylic alcohol in chemical laboratories.

The pipette illustrated by the accompanying woodcut is made of glass. The figures indicate the size of the different parts in millimeters. At the top, *o*, the outer tube has an opening about two millimeters in diameter. When using the pipette, the opening is closed with the index finger of the right hand, while the tube *r* is clasped by the thumb and middle finger, and thus drawn up. At the lower end of *r*, a piece of rubber-tubing is attached, which fits the tube *p* snugly, and should be slightly moistened before using the pipette. Whenever the bulb *k* is filled with liquid, by drawing the tube *r* upwards, the index finger may be removed, and the pipette will empty itself.

A New Method of Making a Volumetric Solution for Determining the Hardness of Water.*

BY C. R. C. TICHBORNE, F.C.S.

THE author stated that he read this paper before the conference, because he considered that the pharmaceutical profession was the proper body from which analysts should be selected.

It was remarked that, to determine the hardness, we have never been able to improve, or modify, to any extent, the original process of Dr. Clarke, invented nearly half a century ago. The most important proposals have been made in connection with the making of the soap solution and the standard calcium solution used for titration. Dr. Clarke used a soap made from animal fats (curd soap) and it has been respectively proposed to use a soft soap made from olive oil, lead soap (Emp. plumbi), or a soda soap of olive oil (Castile soap). These are undoubtedly better than curd soap, as the fatty acids in the others mainly consist of oleic acid, and the oleates are less prone to separate in cold weather.

Dr. Tichborne now proposes to prepare a definite oleate of soda to replace the somewhat variable soap solutions.

He points out in this paper that oleic acid forms a monobasic and a dibasic salt. Either answers for the purpose.

The following is the process: 5 *cc.* of oleic acid are measured with a pipette and 50 *cc.* of alcohol added to it in a beaker; two drops of phenolphthalein solution are also added, and immediately a volumetric solution of soda is run in until a pink indication is produced. This indicates that the point of neutrality has just been passed. The result is a solution of monobasic salt. A drop more of the volumetric solution of soda develops the pink to a magenta, but, as the process goes on, the solution again becomes decolorized, indicating the formation of the dibasic salt. When half of the second equivalent of soda has been added, the solution begins to pectize, and when the process is complete, the solution becomes a solid jelly. Whichever solution is made (the author prefers the latter, as it lathers more freely and is more permanent), the oleate of soda is then made up to the required measure by the addition of a mixture of equal parts of alcohol and distilled water. The advantages claimed are that the soap solution may be made in five minutes, requires no titration against a standard water, and is more permanent than those made from ordinary soaps.

* From a paper read at the Brit. Pharm. Conference. Abstract after *Chem. and Drugg.*

Sclerotinic Acid.

SCLEROTINIC acid is a substance without taste or odor, feebly acid and hygrometric, but not deliquescent. It has been obtained from ergot by MM. Dragendorff and Podwissotsky; good ergot containing about four or four and one-half per cent of the substance. In their experiments on frogs, they found that subcutaneous injection of half a grain caused almost complete paralysis, commencing in the hind limbs; there was no reaction on irritation; the cornea was insensible; from time to time, a feeble cardiac contraction was noticed. This state persisted for some days; then there was slow amelioration; finally, a fresh attack of paralysis, followed by death.

In 1879, Nikitin published a very complete work on the physiological and therapeutical action of sclerotinic acid.

The principal symptoms observed by experimentation on various animals were paralysis, diminution of blood pressure and of the contractile force of the heart in cold-blooded animals.

In acute poisoning, he found diminution of temperature up to the time of death, gradual slowing up of respiration, which underwent complete arrest before the arrest of circulation in fatal cases, and finally augmentation of the peristaltic movements of the intestine. From many experiments, Nikitin concluded that sclerotinic acid induced uterine contractions, whether the organ was gravid or not, and rendered the contractions stronger when they already existed.

As regards the therapeutical action of the substance, Nikitin recommends the employment of sclerotinic acid, in the dose of three grains, to produce uterine contraction. He has never observed tetanic contraction of the uterus under its use. The mortal dose in the adult is about one hundred and fifty grains.

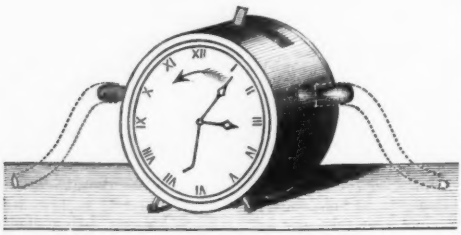
Among other observers, opinions regarding the therapeutical value of the drug are widely divergent. Hobert, who first administered it, obtained no beneficial results from strong doses in pulmonary hemorrhage or hemophilia.

Ganguillet found that strong doses (fifteen grains) augmented the duration of uterine contraction during labor; this result was obtained about half an hour after the administration of the drug; he gave the acid in an equal quantity of powdered sugar. Rennert injected the acid subcutaneously, and obtained results which he considered inferior to those obtained from the use of ergotin. Professor Prevost, of Geneva, has used this substance in metrorrhagia from fibromatous tumors, and considers it as active, if not more so, than ergotin. Stumpf asserts having obtained good results in various forms of hemorrhage, and recommends the employment of strong doses. The observations are, it must be said, as yet, too few to pronounce definitely on the therapeutical value of the drug.—*Med. and Surg. Rep.*, Sep. 16th, 1882.

A Possible Poison for Tubercular Bacteria.

A PAPER was recently communicated to the Paris Académie des Sciences, by M. De Korab, on the action of *helenin* (a proximate principle occurring in elecampane) on the bacteria of tuberculosis. The facts mentioned deserve notice, although we fear that the hopes suggested are too bright to be realized. The bacilli were cultivated in bovine blood serum, which was daily heated for a week to effectually sterilize it, and was then coagulated by a temperature of 65° C. A guinea-pig having been rendered tubercular by inoculation and inhalation, small tubercular masses were taken from it, introduced into ten tubes containing the tubercular serum, and the tubes plugged after some helenin had been poured into three of the tubes. All

were kept at a temperature of 37° C. for a week, and at the end of that time inoculation experiments showed that organism in the tubes, to which the helenin had been added, no longer caused tuberculosis, which was readily produced by the contents of the other tubes.



Automatic Cut-off for Gas.

THE apparatus here illustrated has been devised by H. Michaelis, and thoroughly tested in the Pharmacological Institute of the University of Berlin. It cuts of the supply of gas at any previously-determined time within the next twelve hours, and therefore puts out all lights connected with it.

The apparatus looks like an ordinary clock, which may either be placed upon the table or suspended from the wall. By means of rubber tubing it is connected with the gas conduit; the clock is wound up, and the special alarm hand, which is situated upon the face, set upon the exact hour and minute at which the supply of gas is to be stopped. When the proper moment is reached, the turning of the alarm wheel shuts off a stop-cock situated in the gas pipe passing through the clock. At the upper part of the case, there is a slit from which projects a lever connected with the stop-cock, by means of which the latter can be turned on and regulated, independently of the clock work.

Although the apparatus is primarily intended for ordinary coal gas, still it may be used also for other gases, as long as they do not attack brass. It may also be used for the automatic stoppage of gas motors or gas engines.

The apparatus may be obtained from F. L. Loebner, manufacturer of clocks, Berlin, Potsdamer Strasse.—*Ber. d. Deutsch. Chem. Ges.*, 1882, 1,397.

Microscopic Organisms in Solutions of Certain Inorganic Salts.*

BY C. H. BOTHAMLEY, F.C.S.

THE growth of algæ and fungi in solutions containing organic substances is a matter of common observation, but the formation of such growths in inorganic solutions is comparatively rare. In the Yorkshire College Laboratory a green vegetable growth continually forms in solutions of sodium phosphate, magnesium sulphate, and calcium sulphate respectively, though no such growth is formed in solution of ammonium salts and other reagents standing on the same shelves. Experiments made in the usual way prove that the germs of those organisms are derived from the air.

Under the microscope they are found to resemble *protococcus* in general structure, but are much smaller, and belong to that class of organisms grouped together under the name *crococcus*. The solutions in which this growth forms contain traces of ammonia, and the sodium phosphate contains some sulphate. The amount of phosphoric acid in the magnesium sulphate solution is not sufficient to give a reaction with ammonium molybdate. Possibly we have here further evidence that the formation of these green vegetable growths constitutes a very delicate test for phosphoric acid.

* From a paper read at the Brit. Pharm. Conference. Abstract after *Chem. and Drugg.*

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THE PHARMACOPŒIA OF THE UNITED STATES OF AMERICA. Sixth Decennial Revision. By Authority of the National Convention for Revising the Pharmacopœia, Held at Washington, A.D., 1880. New York: William Wood & Co., 1882, pp. xliii., 488, 8vo.

LONG looked for, it has come at last—the Pharmacopœia of 1880.

The fourth and fifth Revisions, respectively, were not published until three years after the meeting of their conventions; and if we remember rightly, much unfavorable criticism as to unnecessary delay was indulged in by members of the late convention. If we mistake not, even the distinguished chairman of the revision committee himself ventured to predict that this edition, at least, should be out within a year. Little recked he the difficulties, delays, and vexations associated with the handling of a committee of twenty-five members resident in different localities of the United States, whose opinion had to be taken upon every question raised. We are told that over one hundred and seventy circulars, some of them quite voluminous, were sent out to every member of the Revision Committee by its energetic Chairman. The wonder is, then, not that the book did not make its appearance earlier than two and a half years after the adjournment of the Convention, but that, with so cumbersome a committee of twenty-five members, a longer time was not consumed. The great burden of such a work, after all, devolves principally upon one man, by right, the chairman, and much of the success of the undertaking depends upon his industry and capability.

The new Pharmacopœia has been anxiously looked for by both the medical and pharmacal professions, and now that it has appeared, its reception is generally one of satisfaction.

The "get up" of the book is unexceptionable—the paper upon which it is printed is of the best, the printing clear and distinct, and the choice of different types for expressing the names of drugs, formulæ, etc., very judicious.

A marked feature of the book is the almost absolute freedom from typographical errors, probably accounted for, to some extent, by the fact that the *proofs* were sent for correction to each of the twenty-five members of the Revision Committee.

As a new feature of this edition, there appears the introduction of a historical notice, detailing briefly, but clearly, the history of the formation and development of the Pharmacopœia of the United States from its first conception by Dr. Lyman Spalding, in 1817, to the last convention, held in May, 1880. A short account of each convention is given, together with the names of the officers and revision committees. Then comes an abstract of the proceedings of the National Convention of 1880, giving the names of the delegates, present and absent, of the officers-elect, and, finally, of the twenty-five members of the new Committee on Revision.

A mournful and touching thing connected with the Convention of 1880 was the fact that all the officers of the Convention of 1870 were deceased except the assistant secretary; the president, two vice-presidents, and secretary died during the interim, devolving the duty of calling the meeting of 1880 upon Dr. Jas. E. Morgan, of Washington, D. C., the Assistant Secretary.

In the Abstract of Proceedings, the powers and duties of the Revision Committee are given, and the general principles to be followed laid down.

The most noticeable changes made in this edition are:

1. Alphabetical arrangement: the former divisions into primary and secondary lists, and preparations being abolished. This is undoubtedly a great convenience for purposes of reference.

2. Descriptions of crude drugs sufficiently complete to

indicate their distinctive characteristics. The Pharmacopœia is thus rendered complete in itself.

3. In the chemical formulæ, we fail to see the necessity or propriety of adding the old notation. The new nomenclature has been definitely adopted by chemists, and the sooner the old is forgotten the better.

4. Parts by weight for formulæ:—All measures of capacity are abandoned, except in the case of fluid extracts, and in those cases where definite expressions of weight are required, as in the pills and troches. Even here, however, we are inclined to think that it would have been better to have made no exceptions. This we shall refer to again in its appropriate place.

5. The arrangement of quantities in the centesimal ratio:—The advantage of this is obvious, as giving at a glance the per cent strength of any preparation.

6. Great care is evidently taken with the nomenclature of drugs, both that the names may be the proper ones, and the terminations correct. Also with the natural history references, to bring them up to the latest knowledge. It is evident that much painstaking labor has been devoted to this part of the subject.

The incorrect term *officinal* is still retained. It should be *official*. The Pharmacopœia is the result of the official acts of a convention, and only those articles are introduced which are approved by the official committee of that convention. The term *officinal* relates properly to such articles as are kept on sale in drug shops, its root *officina* meaning a shop. Official comes from *officium*, an office. All the proprietary medicines are *officinal*, but certainly not *official*.

In the tables of weights and measures, *gram* is spelt *gramme*. The former is the English spelling, and is given as correct by the American Metric Association.

The preface is signed by the entire committee of twenty-five, of whom we are sorry to notice that one, Dr. B. F. Gibbs, of the U. S. Navy, is since deceased.

The body of the Pharmacopœia proper, devoted to drugs and their preparations, occupies three hundred and eighty-four pages.

While the work is undoubtedly a great improvement upon its predecessor, and the committee is entitled to all credit for the labor they have expended upon it, still, according to our views, there are some matters which might still further be improved upon.

We appreciate the temerity of criticising what is the result of the prolonged consultation of twenty-five selected men as is the Pharmacopœia, and it is done in no spirit of captious fault-finding, but rather with the hope of contributing to some extent to the future improvement of the book. It is only by free expression of opinion that such improvement can be reached.

On the first page, the eye meets a new name, *Abstracta*, applied to a new class of preparations. These appear to be entirely unnecessary preparations. They are, in reality, nothing but powdered extracts raised to the definite strength of two hundred per cent by trituration with sugar of milk; and this last, namely, a definite strength, is their only redeeming feature. The name *Abstractum* is but a synonym of *Extractum*, and from the similarity of names, mistakes are made very possible in prescribing. We have already, as preparations of these same drugs, the extracts, the fluid extracts, the alkaloids, the triturations, and the tinctures, surely quite enough for practical purposes. It may be that in some cases a powder representing the active principle may be desired.

A better way to meet the want would be to provide for a powdered extract (for example, extractum bellad. pulv.), which shall have the same strength as the extract from which it is made. The process would be simple enough; carry the evaporation to complete dryness, and add sufficient sugar of milk to restore the bulk. While on this subject, we would suggest also that the solid extracts should have a definite strength; for instance, one part should represent, say five parts of the drug, that is, five hundred per cent. We admire the formula for making the solid ext. ergot, which is simplicity itself: Take five hundred parts of the fl. extract, and evaporate to one hundred parts. At present, this is the only one of the solid extracts for which a definite strength is prescribed. Practically for most of them, the strength of the drug is obtained after the manner of fl. extracts, and the strength would naturally correspond very nearly to that directed for extract of ergot. Under this same heading, it is in order to speak of the *triturations*. This class has a better claim to recognition than the *abstracta*, for the reason that they offer a standard form for the dilution of such powerfully concentrated medicines as the alkaloids, and at the same time a method of accurate subdivision. The true principle of uniformity is here applied, the strength (ten per cent) prescribed, and general directions given. It is unnecessary to specify a long list of individual *triturations*.

Even were the class of *abstracts* desirable, there are some of them (as A. belladonnæ, A. ignatiæ, and A. vucis nom.) that had best take the form of triturations, being made from their alkaloids. Then we would have an absolutely definite therapeutic strength, whereas it is well known that different samples of the crude drugs, from which the abstracts are directed to be made, vary greatly in the proportion of their active principles. Unnecessary preparations entail unnecessary trouble and expense upon pharmacists, and wasted labor upon the medical student and physician. It is hoped, therefore, that in the forthcoming edition of 1885, this class will be dropped, or, rather, converted into *powdered extracts* uniform with solid extracts.

We are glad to notice that *all* the official vinegars have been made uniform at ten per cent strength, and we are sorry that the same cannot be said of the dilute acids. It is disappointing to be informed that they are ten per cent strength of the *absolute* acid, when the absolute acid is a thing unknown to the Pharmacopœia. As physicians and pharmacists, we have nothing to do with the absolute acid. We learn the doses of the official acids, and still under the new Pharmacopœia, as under the old, must learn the doses of the dilute acids independently; for it is just as difficult, or more so, now to remember the value of each acid in its absolute equivalent, as it was formerly to remember the arbitrary strength of the old formulæ. All this difficulty would have disappeared by making the dilute acids (except HCy) ten per cent of the official form.

A glance at the formulæ given for the dilute acids will show that this apparent uniformity is fallacious. Dilute acetic acid is but six per cent of the absolute acid, and is seventeen per cent of the official, although in the preface, page xxxi., it is stated that *all* the diluted acids are ten per cent of the absolute, excepting *HCy*.

The presumed explanation of the absolute acid being taken as a standard, is that it was a compromise with those members of the committee who opposed making any change in the doses of the old preparations. The change suggested here would make the dilute acids weaker, and would therefore be on the side of safety.

In making medicated waters, percolation through absorbent cotton saturated with the volatile oil, is noticed, this being a substitute for the old method of triturating with magnesia and filtering.

In the cases of decoctions and infusions—a step has been taken in the right direction by prescribing a general formula and a strength of ten per cent unless otherwise ordered. By this plan the pharmacopœia is rid of useless repetition in giving formulæ for no less than thirty six decoctions and infusions which were enumerated in the fifth revision.

It is a question, however, whether the strength given (ten per cent) is not too high. A very large number of the tinctures have but this strength, and when we reflect that the average dose of tinctures is one teaspoonful, and the average dose of decoctions and infusions is a wineglassful—it would seem better to have made these preparations but five per cent. It is true that they can be diluted in the administration, but the very idea of a decoction or infusion is of a dilute form of the medicine. Adopting the five-per-cent strength, would take in two now given special formulæ—

namely, I. Brayeræ and I. Pruni Virginianæ. The previous average strength of decoctions and infusions was one part to sixteen or one part to thirty-two. Five per cent would make them one part in twenty.

The most scientific and most useful class of preparations in the pharmacopœia are the fluid extracts. It is really refreshing to contemplate them; they are always the same, cent per cent of the drug, never any doubt as to their strength nor dose if the dose of the drug itself be known. Would that they could supersede the heterogeneous *tinctures*, *spirits*, and *wines*

The introduction of the *Chartæ* supplies a want in the pharmacopœia. In the liniments we notice the substitution of cotton seed oil for olive oil.

Massa is another new name applied to pill mass in contra-distinction to *pills* and comprises three preparations: namely, M. hydrarg., M. copaibæ, and M. ferri carb. This is manifestly right as pills are now directed, but it seems as though both classes might be included under *massa* to advantage, by giving a formula for the mass in proportionate weights and direct that a pill shall weigh so much. As the pills are now ordered, an examination of the formulæ and comparison between the column of grains and column of grams shows how awkward it is. It would be better to express the pill mass in parts by weight to make one hundred, so that each ingredient would be so much per cent, and direct that all pills be made of a definite weight, say twenty or twenty-five centigrams each (three or four grains).

The same remarks apply to the official troches—make the mass proportionate weights to one hundred, and direct each troche to weigh one gram (fifteen grains). By this means these preparations would conform more closely to the general plan of the book. We can see no reason for retaining such simple prescriptions as Pil. aloes, Pil. asafœtidæ, Pil. rhei, and Pil. opii.

In regard to the latter there is a positive objection. One pill is a large dose of an active poison and might easily effect harm if thoughtlessly ordered. It should have shared the fate of the *Liq. morphiæ sulph.*

For suppositories a general formula is given, and all the special formulæ dropped. This is as it should be; the suppositories of the last pharmacopœia were nothing more than simple prescriptions, and should have had no place in the list.

It is quite as discouraging to contemplate the class of tinctures, as it is pleasant to consider the fluid extracts. True, there has been an abortive attempt at something like uniformity by making the strengths ten, fifteen, or twenty per cent as the case may be, but this offers little or no advantage practically to the physician in determining the relation between any individual tincture and its parent drug.

Each one must still be learned for itself as before, and it is no small task to impose upon the memory of the medical student and physician when it is borne in mind that there are now *seventy-four* official tinctures. How much better to have followed the example of the decoctions, infusions, and triturations, and directed a uniform strength with general instructions for preparing, specifying only those requiring peculiar treatment. This would also have saved much repetition, as for instance we find the phrase "pack in a cylindrical percolator," etc., repeated no less than forty-four times.

The time is coming when the profession will demand a well-considered uniformity in preparations of the pharmacopœia. It is already foreshadowed in the present revision, and it is hoped will be completed in the revision of 1890. Space does not allow of a full discussion of this important theme here, but to appreciate the importance of the subject one needs only refer to the discussion upon the establishment of an "international pharmacopœia" at the Fifth International Pharmaceutical Congress, held in London, England, in August, 1881, as published in NEW REMEDIES of October, 1881.

As far as danger of accidents occurring in prescribing is concerned, were tinctures made ten per cent, it will be seen upon examination that the strength of all but a few trifling exceptions would be diminished, and any mistake would be upon the side of safety. Paregoric should not be in the class of tinctures, but should have been placed with the elixirs, with which its formula and strength corresponds.

To the same end we cannot but think that the directions given for making "tinctures of fresh herbs" of a strength of fifty per cent are a mistake. It should have been either ten per cent (tinctures) or one hundred per cent (fluid extracts).

As an appendix to the volume are given a list of reagents, test solutions, etc.; a table of thermometric equivalents; a table of specific gravity and percentages; a table of solubilities and a table of saturations; all of which show abundant evidence of laborious and painstaking attention. They are of special value to the profession of pharmacy.

Then come the lists of changes made in this revision as compared with that of 1870—a list of the articles added, one of those dismissed, another of the changes in titles, and a table showing the differences in strength between the new and old.

The additions made to the pharmacopœia have been judicious. The number of new titles is 256. The most important are the fluid extracts, thirty-three in number, and the single articles *pilocarpus* and *amyl nitris*. The number of titles dismissed is 229, and have also as a rule been judiciously selected. We think, however, some of them might have been retained with advantage. Aconitine and digitaline are dropped. It is true they are at present of very unreliable strength, but it would seem better for the pharmacopœia to correct this difficulty rather than cut the Gordian knot so summarily. *Elaterium* and *asarum* also seem to deserve to have been retained.

The index is full and complete.

Viewing the book as a whole, it is undoubtedly a great advance upon its predecessor, and as a rule gives satisfaction. The criticisms here made are no reflection upon the committee, for in most of the instances criticised they were left no discretion, but bound by definite instructions given by the convention.

To the committee, and especially its executive officer, are due the thanks of both physicians and pharmacists.

We must not lose sight of the fact that their services are rewarded only by the approval of a good conscience and the commendation of their compeers in the professions.

D. W. P.

WASHINGTON, D. C., Nov. 14th, 1882.

THE AMERICAN HOMŒOPATHIC PHARMACOPŒIA. Compiled and published by BOERICKE & TAFEL. New York and Philadelphia, 1882. Pp. 254, 8vo.

THE homœopathic profession of this country have never possessed a pharmacopœia issued by other than individual authority. Several of the latter description have, however, been prepared by publishers and pharmacists, each differing from the others, and none being recognized as authoritative by the whole profession. Quite naturally the demand for such a work has been limited, owing to the small number of special pharmacists who undertake the manufacture of this class of preparations. The work here offered appears to be more comprehensive and complete than its predecessors, but its standards, nevertheless, can be considered only as those adopted by one manufacturing firm and dealer. This is, no doubt, the reason why we find in it such a multitude of titles, and especially, such as lyssin (from rabies), psorinum (from itch), anthracin (from carbuncle), carcinomin (from cancer), odontenserosine (from decayed teeth, and numerous others of like nastiness. It is not to be presumed that the majority of homœopathic (sic) physicians administer such things in their practice, but, rather, that they are the outcome of illy-balanced minds.

The origin, synonyms, physical properties, and tests for purity are all given with considerable detail, but a comparison with the text of the dispensatory of Stillé and Maisch shows, that much of the matter of this nature has been copied from the latter work. It is handsomely pub-

lished, the choice of type and arrangement of matter being all that could be wished.

THE MEDICAL RECORD VISITING LIST, or Physicians' Diary for 1883. New York: William Wood & Co.

THIS diary is not only made with especial reference to the daily needs of physicians, but is by far the handsomest work of the kind that we know of. Sixteen pages are devoted to facts of various kinds which require to be known by every physician, at one time or another. The usual columns, for daily memoranda of visits and other professional services, are followed by spaces intended for an entry of the amount to be charged, and the page in ledger on which it is posted, and a wide column is devoted to special memoranda.

ESSENTIALS OF VACCINATION: A Compilation of Facts Relating to Vaccine Inoculation and its Influence in the Prevention of Small-Pox. By W. A. HARDAWAY M.D., Professor of Diseases of the Skin in the Post-Graduate Faculty of the Missouri Medical College, etc. Chicago: Jansen, McClurg & Co., 1882, pp. 146, small 8vo. $1.00.

THIS work is divided into ten chapters relating to the History of Vaccination, Variola in Animals, Nature of Vaccinia, Vaccinia in the Human Subject, Abnormal Modifications and Complications of Vaccinia, Revaccination, Merits of Different Kinds of Vaccine Virus, Methods of Obtaining and Storing Vaccine Virus, The Operation of Vaccination, and Examination of the Objections to Vaccination.

The book is well written, and gives clearly and forcibly the facts relating to this very important element of protective medicine. We have looked it through with much interest, and heartily recommend it as the best guide to a knowledge of the subject, with which we are acquainted.

A TREATISE ON THE PHYSIOLOGICAL AND THERAPEUTIC ACTION OF THE SULPHATE OF QUININE. By OTIS FREDERICK MANSON, M.D., Professor of Physiology and Pathology in the Medical College of Virginia. Philadelphia: J. B. Lippincott & Co., 1882, pp. 164, small 8vo. $1.00.

THE author gives, first, a very elaborate resumé of the history of the use of sulphate of quinine as a remedy, including the principal experiments that have been made to ascertain its effects on human and animal subjects in health, and its therapeutic properties. Chief among the latter are mentioned, of course, its usefulness in malarial diseases, but rheumatic, yellow, scarlatinal, pneumonic, and typhoid fevers, croup, delirium tremens, cholera infantum, meningitis, and shock are also referred to. Its effects upon the blood, the modes of its absorption and elimination, and its toxicological effects are briefly referred to.

In summing up his conclusions respecting the mode in which this remedy acts, the author says: "In the absence of any other satisfactory solution of the *modus operandi* of quinine, we are justified in declaring that it potently contributes to the removal of disease by rendering the nervous system insensible to the action of the morbific causes of those maladies in which its employment has been proven by experience to be efficacious."

It is to establish this principle that the book has evidently been issued, and much of that which the author says and quotes is calculated to warrant such conclusion. There are, however, other experiences in the use of this remedy—such as its effect in causing contraction of the non-striated muscular fibres of the gravid uterus and of blood-vessels, its value in hastening uterine involution during the puerperal state, its power to control, in some degree, suppurative processes, and its effects as a simple tonic, which can hardly be explainable on this ground. We have, however, read the thesis with much interest and recommend it to those who desire something more extended than the articles on this remedy which are to be found in treatises on therapeutics in general. The usefulness of the book would have been greatly enhanced if it had been provided with either a table of contents or an index.

THE INTERNATIONAL ENCYCLOPÆDIA OF SURGERY. A Systematic Treatise on the Theory and Practice of Surgery by Authors of Various Nations. Edited by JOHN ASHHURST, JR., M.D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated with Chromo-Lithographs and Woodcuts. In Six Volumes. Vol. II. New York: William Wood & Co., 1882, pp. 754, royal 8vo.

EIGHTEEN authors contribute to this second volume, the chapters of which relate to Contusions, Wounds, The Antiseptic Method of Treating Wounds, Poisoned Wounds, Sabre and Bayonet Wounds, Gunshot Wounds, The Effects of Heat, The Effects of Cold, Abscess, Ulcers, Gangrene and Gangrenous Diseases, Venereal Diseases (four chapters), Surgical Diseases of the Skin and its Appendages, Diseases of the Cellular Tissue, and Injuries and Diseases of the Bursæ.

The illustrations include twelve chromo-lithographs, chiefly illustrating venereal diseases.

MATERIA MEDICA AND THERAPEUTICS (Inorganic Substances). By CHARLES D. F. PHILLIPS, M.D. Edited and Adapted to the U. S. Pharmacopœia by LAURENCE JOHNSON, A.M., M.D. Vol II. New York: William Wood & Co., 1882.

LIKE the first volume, this is one of the Series of Wood's Library of Standard Medical Authors. Its publication has for a number of months been delayed by the illness of the author. In its construction, the following order has been followed in the case of each remedy: Absorption and Elimination, Physiological Action, Therapeutical Action, Preparations and Doses, Modes of Administration.

Owing to the increase of our knowledge of therapeutic properties of inorganic substances, the number is constantly receiving new additions, and in this largely consists the advantage possessed by so recent a work. It may also be said of this, as of the first volume, that the writer has made liberal use of the numerous isolated writings relating to the nature and action of remedies that have lately appeared in medical journals.

The arrangement of the matter is alphabetical, no attempt being made to classify the articles according to any therapeutic action. The list includes the following articles and their compounds: Silver, Arsenic, Gold, Barium and Baryta, Bismuth, Cadmium, Calcium, Cerium, Copper, Iron, Mercury, Lithium, Magnesium, Lead, Potassium, Sodium, Tin, and Zinc. In the case of such as have been but recently introduced or but little used, the text will be found to be quite comprehensive and reliable.

MENTAL PATHOLOGY AND THERAPEUTICS. By W. GRIESINGER, M.D., Professor of Clinical Medicine and of Mental Science in the University of Berlin. Translated from the Second German Edition by C. Lockhart Robertson, M.D. Cantab., and James Rutherford, M.D. Edin. New York: William Wood & Co., 1882, pp. 375, 8vo.

THIS is one of the Serial Library of Standard Medical Authors being published by William Wood & Co. It may be called a clinical treatise, numerous cases being quoted in detail as illustrations; but it differs from the usual arrangement in such cases, inasmuch as it is divided into five sections, viz.: General, including the consideration of the methods of study, anatomical and pathological observations, the classification of mental derangements and general diagnosis of mental diseases. The second part relates to the Cause and Mode of Origin of Mental Disease; the third, to Forms of Mental Disease; the fourth, to the Pathological Anatomy of Mental Disease; and lastly is considered Prognosis and Treatment.

The work is not one adapted for easy reference, but requires of the reader a perusal of the whole in order that its contents may be made available. In the matter of treatment, the author speaks only in a general way of the means to be employed, and rarely refers, in his description of individual cases, to the methods adopted for their recovery. The reason for this is, perhaps, his belief that the mental disease is not so much the thing to be treated as the individual

patient who is suffering from a mental disease; but the result, so far as this work is concerned, appears to be that the one who adopts it as his guide will be better informed of the means of diagnosis than able to adapt the treatment to the individual case requiring it.

THE HUMAN EAR AND ITS DISEASES: A Practical Treatise upon the Examination, Recognition, and Treatment of Affections of the Ear and Associate Parts, Prepared for the Instruction of Students and the Guidance of Physicians. By W. H. WINSLOW, M.D., Ph.D., Etc. One Hundred and Thirty-Eight Illustrations. New York and Philadelphia: Boericke and Tafel, 1882, pp. 526, 8vo.

THIS is arranged so as to consider the subject in the following order: Anatomy, Physiology, Examination of the Ear, Diseases of the External Ear, Injuries and Diseases of the Membrana Tympani, Diseases of the Middle Ear, Complications of Chronic Purulent Inflammation of the Tympanum, Diseases of the Middle Ear and Associate Parts, Electricity in Aural Diseases, The Internal Ear.

The author shows a good knowledge of the pathology of aural troubles, and in the treatment mainly adopts the use of remedies homœopathically.

The text is well written, and, without being too elaborated for the needs of the student and general practitioner, contains all the information to be reasonably looked for in such a treatise. It is handsomely published, and should become a popular work.

ON SLIGHT AILMENTS: their Nature and Treatment. By LIONEL F. BEALE, M.B , F.R.S., etc. Second edition. Enlarged and illustrated. Philadelphia: P. Blakiston, Son & Co., 1882, pp. 283, 8vo. Cloth, $1.25; paper, 0.75.

IT seems to have been reserved for one who, by his habit of minutely examining microscopic objects and distinguishing the character of their details, has learned that nothing is without importance, to write at length upon those numerous lesser ailments which are usually ignored by writers on medicine, but which form the bulk of the ills which render mankind uncomfortable.

The leading topics are: the Tongue in Health and in Slight Ailments; Appetite, Nausea, Thirst, Hunger; Indigestion; Constipation; Diarrhœa; Intestinal Worms; Vertigo—Giddiness; Biliousness—Sick Headache; Neuralgia; Rheumatism; the Feverish and Inflammatory State; the Actual Changes in Fever and Inflammation, and Common Forms of Slight Inflammation.

It would be impossible within the space of a brief notice to do justice to a work so full of practical suggestions as we find this to be. Its trifling cost is no indication whatever of its intrinsic value, and those who read it will get the opinions and experience of a man whose knowledge has not stopped with the natural history of disease, but extends to its careful treatment.

HYGIENE AND SANITIVE MEASURES FOR CHRONIC CATARRHAL INFAMMATION OF THE NOSE, THROAT, AND EARS. Sixteen Illustrations. Second Edition. By THOS. F. RUMBOLD, M.D., Professor of the Diseases of the Nose, Throat, and Ears, in the College for Medical Practitioners of St. Louis, Mo., etc. St. Louis: Medical Journal Publishing Co. 1882, pp. 190, 8vo. $1.50.

WE have already noticed the first edition of this valuable and eminently practical work by one of the best-known authorities of this country. Just now, when so much is being said on the subject of general hygiene and the hygiene of special occupations, a work of this character relating to the care of special organs is seasonable, and it would be well if the example of its author were more generally followed by specialists in other departments of medicine.

HOW TO BE WEATHER-WISE: A New View of Our Weather System. With Illustrations. By ISAAC P. NOYES. 12mo, pp. 51. Price 25 cents. Fowler & Wells, Publishers, 753 Broadway, New York.

THIS is a brief and plainly-written explanation of the causes of changes in the weather, based upon the system of the United States Signal Service. It also explains the nature of that service. Comparatively few appreciate the value of the Weather Bureau, because its work is but little understood by the people who read the daily "Indications." Mr. Noyes shows how the data are obtained for these indications, and how simple a matter it is to observe weather signs, when the principle involved in weather movements is understood.

THE PHYSICIAN'S VISITING LIST (Lindsay and Blakiston's) for 1883. Thirty-Second Year of its Publication. Philadelphia: P. Blakiston, Son & Co.

THIS long-established work is again issued. Its publishers announce several different styles, varying in capacity from twenty-five to one hundred patients weekly, and costing from one to three dollars. In addition to the blank leaves for the usual memoranda are a number of pages of text containing facts not easy to remember, but which occasionally require to be available at short notice. There are no works of this kind in the market that have greater popularity, or which are more generally used.

JOURNAL OF CUTANEOUS AND VENEREAL DISEASES. Edited by HENRY G. PIFFARD, A.M., M.D., and PRINCE A. MORROW, A.B., M.D. New York: William Wood & Co., October, 1882. Vol. I., No. 1. Pp. 32. Large 8vo. Monthly. $2.50 per year.

THERE is usually some ground for questioning the propriety of increasing the number of special journals that may profitably be issued at the present time, but when they present the attractions possessed by the one here referred to, the doubt is comparatively slight. This number has several interesting original articles, book reviews, selected articles, and items. Two excellent illustrations are given; one, illustrating a "ring-worm" (or trichophytosis) of the inner surface of the thighs, being a beautiful specimen of chromo-lithography.

ILLUSTRATED CATALOGUE OF SOLUBLE MEDICATED GELATIN PREPARATIONS. Manufactured by Charles L. Mitchell, M.D., Ninth and Race streets, Philadelphia.

THIS handsome catalogue, issued by the pioneer maker of this class of bougies, suppositories, crayons, and pencils in this country, will be found to be a desirable addition to the reference books of the physician and pharmacist.

DRUGGISTS' LABELS AND PHYSICIANS' PRESCRIPTION BLANKS.

THERE is hardly a limit to the variety of labels and designs for prescription blanks and stationery for the use of pharmacists and physicians, but we rarely see any which show better taste and workmanship than those issued by Woodbury & Co., of Woodstock, Vt. A collection of specimens of recent revision from this firm, which has lately come to hand, are characterized by good taste and handsome execution.

PROCEEDINGS OF THE FOURTH ANNUAL MEETING OF THE NEW YORK STATE PHARMACEUTICAL ASSOCIATION. Held in Albany, Wednesday and Thursday, June 20th and 21st, 1882. Also the Constitution and Roll of Members.

IF we were to offer any criticism of this very full and handsomely published report, it would be that it gives too literally the language of extended discussions upon unimportant subjects.

PROCEEDINGS OF THE PENNSYLVANIA PHARMACEUTICAL ASSOCIATION at its Fifth Annual Meeting, held in Altoona, June 13th and 14th, 1882. With the Constitution, By-Laws, Code of Ethics, and Roll of Members. Pp. 184, 8vo.

THIS beautifully executed report of proceedings might well be used as a model for some other organizations of similar character. We have already given elsewhere a synopsis of the proceedings which are here found at length.

PROCEEDINGS OF THE NORTH CAROLINA PHARMACEUTICAL ASSOCIATION at its Third Annual Meeting, held at Winston, N. C., August 9th and 10th, 1882. Constitution and By-Laws, List of Members, and List of Registered Pharmacists in North Carolina.

OF over three hundred registered pharmacists in the State, we find that much more than half are already members of this flourishing society.

PROCEEDINGS OF THE THIRD ANNUAL MEETING OF THE IOWA STATE PHARMACEUTICAL ASSOCIATION. Held in Des Moines, February 14th–15th, 1882. Also Constitution and By-Laws, Roll of Members, Amended Pharmacy Law, Regulations of the Board of Pharmacy, etc. Pp. 176, 8vo.

THIS Association has a long list of members, and the report of its proceedings shows that they are actively interested in its affairs. There is a feature of its publication to which we have decided objection, namely, the insertion of whole pages of advertising matter in the text, backed with the matter of the report, and paged with it in such manner that their removal would mutilate the report. The report contains a lithographic portrait, as a frontispiece, of Geo. B. Hogin, of Newton, the second president of the Association.

PHOTOGRAPHS OF MEDICINAL AND INTERESTING PLANTS, TAKEN FROM NATURAL LIVING SPECIMENS. By C. L. LOCHMAN (of Bethlehem, Pa.).

WE have already drawn attention to this highly interesting and valuable collection of plates, and can only repeat our advice that all of our readers who take an interest in botanical studies, or in pharmacognosy, should procure a set of these photographs, which afford a much more accurate figure of any plant than can be produced by drawings. The photographs are printed on albumen paper of an average size of six by eight inches, and are mounted on cardboard nine by twelve inches. To each is attached a label with systematic and English names and synonyms, natural order, habitat, time of flowering, color of flowers, and medical properties. The price for the whole set (one hundred and twenty-one so far), or any number, not less than fifty, is at the rate of eighteen cents a piece; a smaller number selected, twenty cents a piece; delivered, free of charge, in Philadelphia or New York, or at any point where the express charges are not greater than to these points.

THE PHYSICIAN'S POCKET DAY-BOOK. Designed by C. HENRI LEONARD, M.A., M.D. Detroit, Mich., $1.00.

WE have already noticed, in former years, this very ingenious and convenient daily record for physician's use. It has several very notable features, viz.: It is capable of being used for any year and may be commenced in any month. It has a capacity for a record of thirteen months for either twenty or forty patients weekly. Its obstetrical record will hold ninety-four cases, and provides for a variety of statistical information such as every physician should preserve. The usual tables for records of deaths are omitted. Whether this is upon the presumption that the doctor who uses this book will have no fatal cases, or that he will send his bad cases to some one else, or that he is likely to be rather sensitive on this topic, and would prefer to omit any record of it for the information of posterity we are unable to say. The space ordinarily occupied with mortuary statistics is very well consumed by the space intended for accounts.

The method suggested for keeping accounts is very ingenious and will enable the person using it, to dispense with much of the labor and annoyance which this part of his business imposes.

Together with this book we find a specimen of bill for physician's use, which is provided with a stub for recording its number, amount, payments on account, etc. It is an admirable invention and we cordially recommend those who are interested in saving labor and money for themselves to get a supply of them. They will not be likely to use any other when they have once tried these bills.

NOTES, QUERIES AND ANSWERS.

Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us, as come within the scope of this journal, provided they are accompanied by the name and address of the writer. Answers to queries received after the 5th of the month will lie over until the next issue. Unless special instructions to the contrary accompany the query, the initials of the correspondent will be quoted at the head of each answer.

When asking for the formula of an unusual, patented, or proprietary compound, always accompany the query with any information you may already possess regarding the locality in which it is used, its use and reputed effects, in order to enable us to make inquiry without waste of time and labor. When it can conveniently be done, send also a specimen of the label used on packages of the compound.

No. 1104.—**Tinctura Nucis Vomicæ** (Dr. J. J. W.).

We are asked to state why the new pharmacopœia directs this tincture—as well as tinctura ignatiæ—to be made by a somewhat roundabout process, instead of by simple percolation.

The principal reason why this process was adopted was already mentioned in one of the preliminary reports of revision (that of the Amer. Pharm. Assoc.), presented to the Convention of 1880. It is well known that nux vomica and ignatia, even when in powder, are exhausted only with difficulty. Working on a small scale, for the supply of his business, a pharmacist will scarcely ever succeed in completely exhausting the powder by simple percolation, unless a very large amount of menstruum be consumed. Those who work on a large scale, and who can either use a continuous displacement apparatus, or can recover the excess of menstruum with economy, will, of course, be able actually to exhaust the powder. The difficulty mentioned above has been the cause of the great variability in the strength of these important tinctures, as supplied by different pharmacists. The percolation being usually interrupted, when the desired volume had been obtained, it depended on the chances of packing and on the rate of percolation, whether the product contained much of the active principle or not.

Comparative experiments have shown that 100 parts of powdered nux vomica or ignatia, when *exhausted* with a menstruum composed of *eight* (8) *parts*, by weight, of alcohol, and *one* (1) *part*, by weight, of water, yield, on an average, 10 parts of *dry* extract. A tincture, therefore, which would contain, in 100 parts, *all* the soluble matters obtainable from 20 parts of powdered nux vomica, by the above-quoted menstruum, should be found to contain 2 per cent of *dry* extract.

Now such a tincture might be made in *two* ways: *First.* By *completely* exhausting the powder with the above menstruum, even though a very large quantity of percolate may be obtained; then distilling off the alcohol until the resulting tincture weighs exactly 100 parts. This method has several disadvantages. It is tedious, owing to the protracted percolation, and distillation (or evaporation); and it produces a product which is weak in alcohol, since the large quantity of menstruum consumed has introduced a considerable amount of water, most of which remains behind when the alcohol is distilled off. *Second.* By carrying the percolation practically to exhaustion, as before, and reserving the larger portion (90 per cent) of the first percolate which contains most of the soluble matters. The remainder of the tincture being then brought by distillation or evaporation to a small bulk (10 per cent), there will be less disturbance, in this case, in the proportion of alcohol and water contained in the product, after the two portions

are mixed. The directions of the pharmacopœia might have stopped here (after the words, page 351, "and mix with the reserved portion"). But the committee, knowing how rarely the prescribed *exhaustion* of nux vomica is really accomplished, desired to add a further control of the strength of the product; namely, the demand that the latter should contain 2 per cent of dry extract. This fact may be utilized in a way not directly indicated by the pharmacopœia. Supposing the tincture had to be made in a hurry: 20 parts of powdered nux vomica would be treated, in a percolator, with the menstruum above mentioned, and a quantity of tincture be obtained corresponding to the length of time available. Let us suppose we have obtained 50 parts of tincture. We may now interrupt the percolation, though the powder is not exhausted, and, by evaporating a small portion of the percolate, in a porcelain capsule, ascertain how much *dry* extract these 50 parts of tincture contain. Naturally they will contain much more than 2 per cent. Then we merely have to dilute the tincture with enough of the menstruum to make it contain 2 per cent of the dry extract.

In the case of ignatia, the strength of 1 per cent of *dry* extract was adopted, in order to render this tincture nearer in actual therapeutic strength of that of nux vomica. Ignatia, namely, contains about twice as large a percentage of alkaloids (strychnine+brucine) as nux vomica.

No. 1105.—**Hydrochlorate of Aniline** (B., Leavenworth, Kansas).

The correspondent wishes to know the commercial name of hydrochlorate of aniline. We know of none. The hydrochlorate of rosaniline, however, has a variety of commercial names. By MM. Renard and Franc it was called *fuchsine*, and this is probable the most correct synonym. "Aniline-red" is the name sometimes used, but there are other shades of red derived from this source, of different chemical composition. It may be noted here that, in substance, fuchsine has a greenish, metallic lustre like the wing-cases of the cantharides beetle, and that it is only when subdivided or in solution that its red color is apparent.

No. 1106.—**Ferro-Prussiate Paper** (H. W. M., Fort Maginnis, M. T.).

The correspondent wishes a formula for making a sensitive paper, known as ferro-prussiate paper, similar to that advertised by an Eastern firm. We are not aware of the special process that this particular manufacturer may follow, but give here the formula published in the *Photographic News*, of London, for August 11th last. Water, 1 oz.; red prussiate of potash (ferricyanide), 1 dr.; ammoniocitrate of iron, 1 dr. These ingredients are to be dissolved and mixed in the dark, or in a room lighted through ruby glass, or several thicknesses of orange-colored post-office wrapping paper rendered translucent with castor oil. This solution if kept in the dark, will be serviceable for some time. It may be applied to white paper by floating the latter on its surface, then hanging it up in the dark to dry. Paper so sensitized should be exposed only to a feeble light previous to being used.

No. 1107.—**Luminous Bottle** (W. P. S., Boston, Mass.).

"Is it possible to obtain a preparation of phosphorus which will, if inclosed air-tight in glass, illuminate sufficiently to read letters (when dark) painted on the glass? If so, would it be durable?"

We have somewhere seen the following plan recommended for those who wish some such means for reading a watch-dial, or for finding objects in a dark room without lighting gas or a lamp, as in a state-room on a steam-ship or in a sleeping-car. Half fill a bottle, which will hold about six ounces, with olive oil. Heat this until the oil is quite warm, and then quickly plunge beneath the surface a piece of phosphorus. How much was recommended we do not remember, but a fragment an inch in length would probably suffice. The bottle is then to be corked tightly, and, after a time, it will be found that, on shaking it moderately, the oil will become sufficiently luminous to render it available for the uses above mentioned. It seems probable that, if letters or figures were to be painted on the bottle with some opaque pigment, these would be rendered legible.

No. 1108—**Ammoniacal Solution of Acetate of Lead** (J. P. M.).

This solution, used as a precipitant for dextrin, may be prepared by adding to a cold, ten-per-cent aqueous solution of acetate of lead half its volume of ten-per-cent of water of ammonia (sp. gr. 0.960), which must be free from carbonate. The precipitate consists of $C_6H_{10}O_5.PbO$. The weight of the well-washed and dried precipitate, multiplied with 0.4208, represents the quantity of dextrin in the precipitate.

The literature of the chemistry of dextrin is given in *Neues Handwörterbuch der Chimie*, herausg. v. Fehling (*Braunschweig;* vol. ii., p. 955). Also in *Husemann-Hilger, Pflanzenstoffe* (2d ed.), vol. i., p. 123.

No. 1109.—**Transparent Glycerin-Soap** (Ohio).

The following process has been recommended by Alwin Engelhardt.

Twenty pounds of fresh tallow and 10 pounds of best cocoa-nut oil are heated to 167° F. On the other hand, 15 pounds of solution of caustic soda of 40° B., or spec. gr. 1.384, 12 pounds of 96% alcohol, 15 pounds of glycerin, 6 pounds of brown sugar, and 2 pounds of water are mixed, likewise heated to 167° F., and the mixture gradually mixed with the former, under brisk stirring. Saponification takes place in this manner, without the necessity of boiling. The reaction is accompanied by a considerable increase in bulk. It may then be covered, and, after it has become a little cooler, it may be scented; finally it is transferred to moulds, which must be so placed that the soap can congeal quickly.

No. 1110.—**Water in Commercial Sulphate of Quinine** (W. S. B.).

This correspondent asks:

"Under *Quininæ Sulphas* of the new Pharmacopœia, the chemical formula calls for seven molecules (or 14 38 per cent) of water of crystallization, while, in the tests, it is permitted to contain eight molecules, or 16.18 per cent of water. Is there not a discrepancy between these statements?"

The discrepancy between the seven and eight molecules was the result of considerable study at the hands of members of the committee. While it was held that a salt with seven molecules constituted the neutral salt in its normal condition, it was, on the other hand, recognized that this *lowest* limit of hydration was generally somewhat exceeded by the commercial salt. Indeed, a large proportion of the latter corresponds to a formula which contains seven and a half molecules, and some of it contains still more water. Since it would have been unfair to place the limit so low that even the accidental attraction of a trace of moisture would have caused the condemnation of an otherwise unobjectionable salt, it was deemed advisable to make allowance for this, and to place the limit, for accidental moisture, so that justice would be done to the consumer as well as to the manufacturer.

It has been frequently stated that crystallized sulphate of quinine does not lose all its water at the temperature of the water-bath, but requires heating to about 120° C. to lose the last portion. This statement is not quite correct, since a prolonged drying at 100° C. or 212° F., say for three hours, is sufficient to expel all, or practically all the water. The temperature of 100° C. is easily attainable, and may be maintained by means of boiling water for any length of time without need of much watching, while a higher temperature can only be kept up for some time at the expense of considerable supervision. Herein lies another advantage of the method of testing proposed.

No. 1111.—**Preservation of Syrup of Bromide of Iron, etc.** (J. J. W.).

This correspondent asks how he may best prevent the

decomposition of freshly prepared syrup of bromide of iron to be kept *in bulk*.

As a rule, it is advisable to put up syrup of bromide (or of iodide) of iron, or similar easily-altered syrups (as also syrup of hydriodic acid) in bottles which should be filled quite full and well corked. But where it becomes necessary to open a stock-bottle frequently in the course of the day, for the purpose of measuring or weighing out odd quantities, the syrups may be kept in bottles or in glass or stone jars of any desired size, provided with a well ground glass faucet near the bottom, or, in its place, by a rubber and glass tube passing through a rubber-cock, and controlled by a pinch-cock. Upon the syrup contained in the bottle or keg is poured, immediately after it has been introduced, a layer of olive oil or of odorless spindle oil. This will keep out the air perfectly, and will gradually descend as the syrup is consumed. When the keg is to be re-filled, the new syrup may be poured at once through a funnel below the surface of the oil, whereby the oily layer will rise again. The oil should, however, be carefully examined for rancidity, and, when this is noticed, it should be changed.

No. 1012.—**Boroglyceride of Calcium and of Sodium** (———).

As a further contribution to the list of antiseptics recently described, may be considered two new substances introduced by G. LE BON, namely, the *Boroglycerides* (or *glyceroborates*) *of calcium and sodium*. These compounds are closely allied to the new antiseptic *boroglyceride* discovered by Prof. Barff, and repeatedly described by us (see November No., p. 346).

The two new compounds are easily soluble, odorless, and innocuous. *Boroglyceride of calcium* is prepared by heating together equal parts of borate of calcium and of glycerin, under constant stirring, until one drop of the mixture, placed on glass, congeals to a clear colorless bead. The melted mass is then poured out on a metallic plate, and will form, when cool, a transparent, glassy, brittle mass. The fragments must be put, while still hot, into a well-stoppered and dry bottle. *Boroglyceride of sodium* is prepared in the same manner, borate of sodium (*i. e.*, borax) being taken instead of borate of calcium. 100 parts of anhydrous borax requires 150 parts of glycerin.

Both compounds possess analogous properties; they melt at about 15 ° C. (302 F.), and are very hygroscopic. When exposed to the air, they deliquesce rapidly, absorbing an equal weight of water. Water and alcohol can dissolve twice their own weight of the salt. Even in very dilute solution, the salts have a highly antiseptic effect. Compared with carbolic acid, they have the advantage of being soluble in water in all proportions, and being, besides, perfectly innocuous. They may be used, without disagreeable effects, for application even to very sensitive organs, as, for instance, the eyes. And they are particularly suitable for the preservation of articles of food.

No. 1013.—**Does Pepsin "Digest" or "Dissolve" Albumen** (A. B. H.).

One of our correspondents writes:

"Under *Pepsinum saccharatum*, in the new Pharmacopœia, in giving the test for the same, we read that 'one grain of saccharated pepsin should *digest* fifty grains of hard boiled egg albumen,' etc. Will you please inform me if the word 'digest' was written advisedly, or whether the word 'dissolve' would answer as well. Do you consider a 'dissolving' of hard-boiled albumen a 'digestion' of it?"

The term "digest" was used advisedly, since the action of pepsin upon substances like albumen produces, not a mere solution of the substance, but modifies its properties at the same time. Albuminoids, as such, are not capable of being taken up by the digestive organs, but have to be converted into "peptones" or "assimilable albuminoids," by means of digestive ferment, which is naturally accomplished during the process of maceration of food in the stomach. The peptonizatiom may also be accomplished artificially, by imitating the natural process through the agency of saccharated (or other) pepsin. The albuminoids undergo a change during the process of digestion, chiefly by the assimilation of (about six per cent of) water, and a considerable modification of their chemical reactions. If they were merely dissolved, the solution should show the same characteristics as the original substance; besides, it should be possible to recover the original substance, which is not the case (as a rule) with peptones.

No. 1014.—**Pocket Pill-Cases** (Westfield, N. Y.).

A correspondent asks where he may obtain a pocket pill-case of wood containing five sections, and screwing together like the pocket or travelling inkstand.

NEW PATENTS.

[*Complete specifications and illustrations may be obtained of any one or more of the following patents by sending the number, title, name of patentee, with twenty-five cents for each copy, to the Commissioner of Patents, at Washington, D. C., together with the name and address of the person requesting the same.*]

263,676. *Machine for Corking Bottles.*—Friederich W. Boldt and Hermann E. Schroder, Hamburg, Germany, assignors to Boldt & Vogel, same place.

263,721. *Machine for Corking Bottles.*—Karl F. C. Petersen, Hamburg, Germany.

263,821. *Manufacture of Soda.*—Ernest Solvay, Brussels, Belgium.

263,833. *Self-Acting Cork-Stopping Machine.*—Oswald Assmann, Zwolle, Holland.

263,851. *Wood-Distilling Apparatus.*—Charles J. T. Burcey, Binghamton, N. Y.

263,852. *Alcohol-Still.*—Charles J. T. Burcey, Binghamton, N. Y.

263,915. *Process of Obtaining and Purifying Glycerin from Soap-Boiler Mother-Lye.*—John Karl Kessler, Milwaukee, Wis., assignor of one-half to Morris Roth, same place.

263,981. *Manufacture of Soda by the Ammonia Process.*—Ernest Solvay, Brussels, Belgium.

264,035 to 264,037. *Process of and Apparatus for the Manufacture of Saccharine Compounds.*—Thomas A. Jebb, Buffalo, N. Y.

264,039. *Bottling Machine.*—John Klee, Dayton, assignor to Edward H. Everett, Dayton, Ohio.

264,044. *Soda Block.*—James McCrodden, New York, N. Y.

264,123. *Bottle Cleaner.*—William C. Baldwin, Salisbury, Ct.

264,127. *Apparatus for Drawing and Dispensing Liquids.*—Louis Bergen, New York, N. Y.

264,169. *Atomizer.*—Joel G. Justin, Syracuse, N. Y. The bottle or receptacle for the liquid is double-walled and chambered, to make an extra air reservoir.

264,197. *Siphon.*—Joseph Saunders, Brooklyn, N. Y.

264,222. *Manufacture of Glucose, or Grape-Sugar.*—Henry W. Bartol, Philadelphia, Pa.

264,381. *Siphon.*—Milton N. Webber, Fort Wayne, Ind.

264,391. *Combined Spoon and Corkscrew.*—Cornelius T. Williamson, Newark, N. J.

264,516. *Artificial Cream.*—Willliam Cooley, Waterbury, Vt., and David H. Burrell, Little Falls, N. Y., assignors to Whitman & Burrell, Little Falls, N. Y.

264,528. *Lozenge Machine.*—Charles H. Hall, Chicago, Ill.

264,586. *Soda-Water Apparatus.*—Francis S. Waldo, Almeda, Cal.

264,616. *Process for the Extraction of Glycerin from the Residuary Waters Resulting from the Manufacture of Soaps.*—Edmond M. L. Brochon, Milan, Italy.

264,624. *Tooth Brush.*—Louis Chevallier, Brooklyn, N. Y.

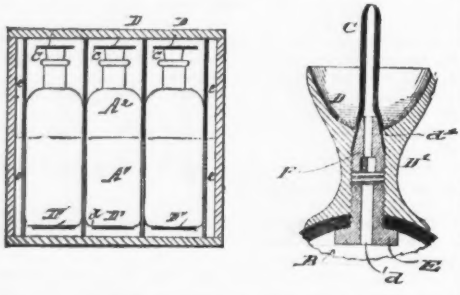
264,730. *Mould for Forming Blocks of Soda.*—James McCrodden, New York, N. Y.

264,783. *Eye-Wash.*—William C. Squiers, Kinmundy Ill. Unites one ounce of sulphate of zinc, half an ounce of oil of wintergreen, half an ounce of laudanum, and thirty drops of oil of sassafras, with three tablespoonfuls of loaf-sugar and four quarts of soft water.

264,839. *Bottle.*—David Lubin, Sacramento City, Cal., assignor of one-half to Harris Weinstock, same place. The

264,857. *Medical Compound for Burns, Scalds, etc.*—Laura E. Bush, Jug Tavern, Ga. Infusion of sassafras-root, pure olive-oil, water of ammonia, crude petroleum, and castor-oil.

264,894. *Packing Box for Bottles.*—Edward L. Mueller, St. Louis, Mo. In combination with the box A, the layer of compartments A^1 A^2, each consisting of the like strips B B C C, intersecting each other midway the like distance, the latter strips further having the horizontal slits *c d*, the veneer-strips D D′, the edges of all the strips B C D D′ projecting beyond the sides and forming spaces *e* between all the sides of the compartments facing the box and the box proper, by means whereof bottles and the like can be packed in the manner and for the purposes set forth.



264,902. *Cork Extractor.*—Albert Slagh, London, Ohio.

264,904. *Syringe.*—Stephen G. Smith, Hannibal, Mo. In a syringe, the perforated and tapered plug F, the screw E, flexible nozzle C, the cup or flange D, and the neck D′, all constructed and combined substantially as set forth.

264,941. *Aerated Tonic Beverage.*—Charles H. Frings, Denver, Col., assignor of one-half to Otto Zwietusch, Milwaukee, Wis. A nutrient and tonic compound beverage to be used as a non alcoholic substitute for malt liquors—such as beer, ale, porter, and the like—consisting of an extract of cereals malted or acted upon by malt, retaining all albuminoids compatible with the presence of carbonic acid, an extract of hops or other aromatic or bitter tonics, and of carbonic acid, the beverage having the usual appearance of lager-beer, ale, porter, or the like.

265,104. *Filter Press.*—Alexander C. Landry, New Orleans, La., assignor to himself and Charles Langa, same place.

265,219. *Horse and Cattle Liniment.*—Patrick Corcoran, York, Neb. Consists of cantharides, mercurial ointment, corrosive sublimate, oil of vitriol, muriate of ammonia, tincture of iodine, spirits of turpentine, oil of spike, oil of origanum, oil of olive, oil of amber, British oil, oil of cedar, and oil of hemlock.

265,243. *Baking Powder.*—William P. Clotworthy, Baltimore, Md. As a baking-powder, a compound of diacetate of alumina, bicarbonate of soda (or its chemical equivalent), and starch or flour.

265,304. *Alcohol Still.*—Charles J. T. Burcey, Binghamton, N. Y.

265,323. *Distilling Apparatus.*—Abraham H. John, Kirksville, Mo., assignor of one-half to Samuel M. Pickler, same place.

265,367 and 265,368. *Manufacture of Bicarbonate of Soda.*—Benjamin T. Babbit, New York, N. Y.

265,390. *Medicine Spoon.*—Thomas Cosbey, St. Louis, Mo.

265,495. *Process of and Apparatus for Concentrating Sulphuric Acid.*—Junius Gridley, Brooklyn, N. Y.

265,517. *Apparatus for Extracting Oil by Means of a Solvent.*—Morris Lancaster, Richmond, Ind.

265,559. *Powder Puff.*—Elene A. Baily, St. Charles, Mo.

265,583. *Medicinal Preparation.*—Gibert Déclat, Paris, France.

265,641. *Mercurial Air Pump.*—Charles Henry Stearn, Newcastle-upon-Tyne, England.

265,770 *Hog-Cholera Remedy.*—Rudolf Dorn, Omaha, Neb. Sulphate of iron, Glauber's salt, arsenic, carbolic acid, hydrochloric acid, and tincture of opium.

265,842. *Nursing-Bottle Tube-Cleaner.*—Thomas Marshall, East Greenwich, London, England.

265,862. *Bottle Label-Holder.*—William Wallace Quiggle, Winnibago City, Minn.

265,904. *Suppository Mould.*—John L. Wrygin, Clinton, Iowa, assignor to Charles F. Keeler, Chicago, Ill.

266,039. *Agitator for Soda Water Receivers and Generators.*—John Matthews, New York, N. Y.

266,060. *Means for Attaching Corkscrews to Bottles.*—Henry W. Simms, Bay City, Mich.

266,079. *Remedy for Corns, Bunions, etc.*—George F. Benkert, Philadelphia, Pa., and Luigi G. Marini, Washington, D. C. Consists of soft, fine India-rubber, with gum-tragacanth, aconitia, subacetate of copper, and alcohol.

266,095. *Bottling Machine.*—John W. Cheeving, Philadelphia, Pa.

266,127 *Pill, Plaster, and Lozenge Machine.*—William C. Franciscus, Lock Haven, Pa.

266,135. *Corkscrew.*—George W. Griswold, Pottersville, N. Y.

266,268. *Manufacture of Glucose from Cactus.*—Wm. B. Brittingham, New York, N. Y.

266,314. *Labelling Machine.*—James C. Richardson, Biscobel, Wis.

266,364. *Bottle-stopper and Draft Nozzle.*—Peter Henrichs, Fargo, Dak.

266,504. *Method of Separating Glycerin from Spent Soap-Lyes, Saline, and Other Substances.*—Francis J. O. Farrell, Dublin, Ireland.

266,559. *Percolator for Rosin.*—Charles C. Tyler, New York, N. Y.

266,573. *Medical Compound for Rheumatism, etc.*—Eben B. C. Wright, Charles City, Iowa. Composed of compound extract of sarsaparilla, fluid extract of poke root, gum guaiacum, iodide of potassium, English wine of colchicum, and alcohol.

267,580. *Artificial Butter and Method of Making the Same.*—William H. Burnet, Chicago, Ill. The process of making a butter-like product of hog's lard, beef-suet, butter, glycerin, salt, water, and coloring material.

266,625. *Percolator.*—Samuel J. Hinsdale, Fayetteville, N. C.

266,756. *Titurating Machine.*—Frances E. Boericke and George Goll, Philadelphia, Pa., assignors to said Boericke and Adolph J. Tafel, same place.

266,773. *Bottle-Washing Machine.*—Henry E. Clinton, Augusta, Ga.

266,777. *Substitutes for Butter.*—Oscar H. Coumbe, Washington, D. C., and Robert R. Roberts, New Orleans, La., assignors by direct and mesne assignments of one-half to M. J. Urie, of Washington, D. C. The process for the production of "Butteroid," which consists in raising (cotton-seed or other) vegetable oil to a temperature of about 90° F., and slowly adding a cold solution of caustic soda, then adding farinaceous flour, first thoroughly cooked in salt and water, and completely incorporating the mass, and then working out the oil-milk, and lastly coloring and flavoring.

266,777. *Substitute for Lard.*—Same patentees as above.

266,797. *Collyrium.*—John Fale, Hawkinsville, Ga.

An eye-water composed of muriate of berberina, pulverized camphor, and camphor water.

266,909. *Apparatus for Distilling Turpentine, and for the Purification of the Crude Products of Distillation Thereof.*—James D. Stanley, Wilmington, N. C.

266,915. *Apparatus for the Recovery of Soda.*—Henrik C. F. Strömer, Paris, France.

266.925. *Process of and Apparatus for Distilling Alcohol.*—Konrad Frobach and Alfred Cords, Berlin, Germany.

266,929. *Filtering Petroleum Distillates for the Separation of Paraffin.*—Henry Warden, Philadelphia, Pa., assignor to the Atlantic Refining Co., same place.

266,951. *Automatic Weighing and Package-Filling Machine.*—Clement C. Clawson, Raleigh, N. C., assignor of one-half to H. K. and F. B. Thurber & Co., New York, N. Y.

ITEMS.

American Pharmaceutical Association Badges.—The number of those who attended the late meeting of the American Pharmaceutical Association was so largely in excess of what was anticipated that over one hundred of those entitled to badges failed inobtaining them. The Chairman of the Entertainment Committee, Mr. Geo. J. Seabury, informs us that he will now furnish badges to such persons as may desire them and are entitled to receive them, on application to him at 21 Platt street, New York.

New Hampshire Pharmaceutical Association.—At the annual meeting of this association, held at Eagle Hotel, Concord, October 17th, the following officers were elected for the ensuing year:

President: Elias S. Russell, Nashua. *Vice-Presidents:* Geo. E. Gordon, Suncook; Stephen F. Sanderson, Rochester. *Secretary:* Geo. F. Underhill, Concord. *Treasurer:* Henry B. Foster, Concord. *Auditor:* Jas. O. Burbank, Manchester. *Reporter on Progress of Pharmacy:* W. P. Underhill, Concord. *Executive Committee:* Robert C. Dickey, Hillsboro Bridge; Chas. A. Merrill, Exeter; Geo. F. Underhill, Concord. *Committee on Papers and Queries:* P. J. Noyes, Lancaster; Austin E. Wallace, Nashua. *Business Committee:* Perry Kittredge, Concord; Amasa P. Fitch, Concord. *Delegates to American Pharmaceutical Association:* Chas. A. Tufts, Dover, N. H.; Chas. F. Hildreth, Suncook; Geo. F. Underhill, Concord; S. F. Sanderson, Rochester; Robert C. Dickey, Hillsboro Bridge. *Alternates:* Elias S. Russell, Nashua; Edward H. Currier, Manchester; W. P. Underhill, Concord; Jos. H. Thacher, Portsmouth; Geo. Moore, Great Falls. *Delegates to Maine Pharmaceutical Association:* Chas. A. Merrill, Exeter; Frank J. Philbrick, Portsmouth. *Delegates to Massachuseets Pharmaceutical Association:* Charles S. Eastman, Concord; Austin E. Wallace, Nashua. *Delegates to Vermont Pharmaceutical Association:* Lucien B. Downing, Hanover; Harlan P. Kendrick, Lebanon. *Delegates to Rhode Island Pharmaceutical Association:* William H. Vickery, Dover; Brackett W. Weeks, Manchester.

GEO. F. UNDERHILL, *Secretary.*

Albany College of Pharmacy.—The college lately received from Charles Pfizer & Co., of New York, an elegant cabinet of pharmaceutical chemicals of their manufacture. At the meeting of the faculty of the college, held October 27th, 1882, the following resolutions were unanimously adopted:

"*Resolved*, That the thanks of the faculty of the Albany College of Pharmacy be tendered to Messrs. Charles Pfizer & Co., of New York, for the elegant cabinet of one hundred and twenty-seven specimens of fine pharmaceutical chemicals, so generously presented by them to the college.

"*Resolved*, That the secretary be instructed to enter the above resolution upon the minutes, and transmit a copy of the same to Messrs. Pfizer & Co."

The college has also received a handsome collection of crude drugs and pharmaceutical preparations from Messrs. Parke, Davis & Co., of Detroit. The class in attendance this year is nearly double that of last season.

W. G. TUCKER, *Sec'y.*

College of Pharmacy of the City of New York.—Attention is directed to the Conversational and Pharmaceutical Meetings, which will be held at the College Building, once a month during the winter, usually on the third Thursday at 8 P.M. Members of the College are invited to present objects of interest, or topics for discussion. Any one interested in pharmacy, both in its scientific as well as its business aspects, though not a member of the College, may attend the meetings.

The attendance at the lectures is again in advance this season, over that of last year. The present senior class has given indications of being a particularly good one, and is expected to pass a very creditable examination.

Flowers Preserved for Three Thousand Years.—In the sarcophagi of the mummies recently discovered in the royal mosques of Deir-el-Bahari in Egypt, a number of flowers were found, which were as fresh and natural as if they had only been a few months old, although they have been entombed for more than three thousand years. Dr. Schweinfurth has studied these flowers and has recognized the larger number thereof. There appears to be one among them, which belongs to an extinct species, while others are now only met with in Abyssinia. The fruits deposited with the mummies have also been wonderfully preserved. For instance, upon some dates found with the mummy of queen Isimkheb, the last royal person which was there interred, the impression of the fingers which had handled them, could be easily recognized.

National Wholesale Drug Association.—The eighth annual convention of this body, heretofore known as the "Western Wholesale Drug Association," was held at Cleveland, Ohio, on the 8th and 9th of November. Twenty-six active, and twenty-four associate members were added to the lists. A delegation from the Proprietary Medicine Companies' Association presented an address, in which it was mentioned that nearly a third of the goods handled by wholesale houses consists of proprietary preparations, and the need for modification of discriminating and unjust taxation was strongly urged. A delegation was also present from the American Pharmaceutical Association. A Committee on Proprietary Goods reported in favor of the contract system, and presented the names of over eighty firms who declined to adopt this plan, as well as numerous others who gave it their indorsement. The report suggested the propriety of refusing goods to those houses which refuse to adopt the plan, and are active in opposing it. The names of 2,500 retailers who indorse the plan were also submitted. Reference was also made to the basis that has been generally adopted, of thirty days' credit.

The Committee on Credits, Collections and Cash Discounts likewise made the contract system the basis of its report.

The Committee on Paints, Oils and Glass reported briefly in regard to trade in articles belonging to this class, the Committee on Drug Market also reported, at greater length, through its chairman, Geo. A. Kelly.

The Committee on Insurance made some very sensible suggestions respecting the need for examining into the security, reputation for promptness, and fairness in settlement of losses, of the companies offering insurance, and also of the need for a lowering of rates that apply to the drug business.

The officers of the Association for the ensuing year are: *President*, Horace Benton, of Cleveland; *Vice-Presidents*, William A. Gellatly, of New York; George A. Kelly, of Pittsburg; George Hopkins, of St. Louis; Samuel J. Hale, of Cincinnati, and H. J. Wilkinson, of Keokuk; *Treasurer*,

S. M. Strong, of Cleveland; *Secretary*, A. B. Merriam, of Cincinnati.

The next annual meeting will be held in New York on the third Wednesday of October, 1883.

A Singular Litigation.—Not long since, a physician in this city who had invested money in a retail drug store was obliged, by the failure of its proprietor, to take the stock as "collateral" for his investment and sell it to some one else. After the bargain had been completed, so we are informed, he said that he would be very glad to send the purchaser what prescription business he could. Whether our information is correct or not as to the foregoing details we cannot say, but the purchaser of the store lately brought suit in the Court of Common Pleas, for the recovery of $5,000, as damages for an alleged breach of contract. The complainant states that the doctor promised to send him all his prescriptions to be filled, but, in fact, he has never sent him any prescriptions at all. The doctor demurred to the complaint on the ground that the contract, if made, was void, as impossible of performance, and immoral. On the 20th of November, Judge J. F. Daly handed down a decision on the demurrer, in which he holds that the contract is such as may support an action, and that the demurrer must be overruled. Judge Daly says that there is nothing improper in a physician contracting to advise his patient to go with his prescriptions to a particular drug shop. In action for damages for a breach of such a contract, there might be much difficulty in getting the necessary evidence, but that fact did not furnish any reason why the action could not be maintained.

Henry Draper, M.D., LL.D.—In the death of Professor Henry Draper, of New York, which occurred on the 20th of November, the scientific world has lost another of its most ardent and original workers. He was the son of the late Professor John William Draper, and was born in Prince Edward County, Va., March 7th, 1837, removing, with his parents, to this city three years later, when his father was appointed to the Chair of Chemistry in the University of the City of New York. He graduated in the Medical Department of the University in 1858, and after spending some months abroad, was appointed on the medical staff of Bellevue Hospital, and served for eighteen months. Since 1860 he had filled, with some intermissions, the Chair of Physiology in the University, and for many years was the managing officer of the Medical Department.

Upon the death of his father, in January last, Professor Draper was elected to the vacant Chair of Chemistry in the Academic Department, which, however, he soon resigned, finding that his duties at the University interfered with his original researches.

He had made at Hastings-on-the-Hudson the largest telescope in the United States—an equatorial telescope of twenty-eight inches aperture, whose construction has been justly described by President Barnard as "probably the most difficult and costly experiment in celestial chemistry ever made." His work on grinding and polishing reflecting mirrors, and his system of testing them, inspired by his earlier experience in constructing a 15½-inch reflecting telescope, remains a standard volume to this day. The laboratory connected with his residence in New York was one of the best equipped in the world, if indeed it had a rival, being furnished with the most refined and costly apparatus, much of which was of his own invention and construction. While yet an undergraduate, he discovered the great advantages possessed by protochloride of palladium in darkening collodion negatives, by far the best method of "intensifying" them to use them for printing that has yet been described. With his first telescope Professor Draper took a photograph of the moon fifty inches in diameter, the largest ever made, his views and those of Mr. Rutherfurd, also of New York, being accorded the palm of absolute superiority among all lunar photographs. He was the first to obtain a photograph of the fixed lines in the spectra of stars, and photographed the spectra of nearly a hundred of these bodies. His beautiful diffraction spectrum obtained in 1872 has been reproduced in Europe as admittedly unexcelled; he succeeded in obtaining by photography the spectrum of the great nebula in Orion—a performance regarded by many eminent scientists as leading the way to the ultimate solution of the great problem of the genesis of worlds; his discovery of oxygen in the sun is to be ranked with this, and though Professor Huggins' photograph of the spectrum of the comet of June, 1881, was two days earlier than Professor Draper's, the accident of time did not diminish the credit due to the American observer for the delicacy and certainty of his operations. His services as superintendent of the Photographic Department of the commission appointed by Congress in 1874 to observe the transit of Venus were recognized by the striking, at the Philadelphia Mint, of a special gold medal in his honor. His wife (a daughter of Mr. Courtlandt Palmer), to whom he was married in 1867, was Professor Draper's enthusiastic and most competent assistant in his scientific work.

Dr. Fred. Hoffmann, lately a retail pharmacist in this city, and now one of the Analysts to the State Board of Health, and author of a well-known work on the analysis of pharmaceutical chemicals, is about to edit a new pharmaceutical journal in the German language, to be published in this city.

Mr. M. A. Lawson, at present the Professor of Botany at Oxford, has been appointed Superintendent of the British Government Cinchona Plantations at Madras, India.

The Wisconsin Board of Pharmacy will hold its next meeting, for the transaction of business and examination of candidates, at Prairie-du-chien, January 9th and 10th, 1883, at 2 P.M.

PHARM. CALENDAR FOR DECEMBER.

N. B.—The officers of Societies, Colleges of Pharmacy, Pharm. Associations, etc., will oblige us by forwarding schedules of their meetings, lists of officers, and any changes that may be desirable.

Date.	Society Meetings.
Friday 1st.	American Chem. Soc.—Meets at New York.
Mon. 4th.	Erie Co. Pharm. Asso.—Meets at Buffalo.
	National Coll. Pharm.—Meet.
Tues 5th.	Philadelphia Coll. Pharm.—Trustees' M.
	Maryland Coll. Pharm —Trustees' Meeting.
	St Joseph (Missouri) Pharm. Assoc.—Semi-Monthly Meeting.
Thurs. 7th.	New York Coll. Pharm.—Trustees' Meet.
	Louisville Coll. Pharm.—Pharm. Meet.
	Massachusetts (Boston) Coll. Pharm.—Trustees' Meeting.
	Philadelphia Coll. Pharm.—Alumni Soc. M.
Tues. 12th.	Pittsburgh Coll. Pharm.—Trust. Meet.
	Chicago Coll. Pharm.—Trust. Meet.
	Massachusetts Coll. Pharmacy.—Pharm. M.
	Kings Co. Pharmaceutical Soc.—Meets in Brooklyn.
	National. Coll. Pharm.—Meet.
Wed. 13th.	Cincinnati Coll. Pharm.—Meeting.
	Board of Pharmacy, New York.—Meeting.
Thurs. 14th.	Newark Pharm. Asso.—Meeting.
	Louisville Coll. Pharm.—Direct. Meet.
	Philadelphia Coll. Pharm —Alumni Ph. M.
	Maryland Coll. Pharm.—Meet.
	New York German Apoth. Society.—Meet.
Tues. 19th	St. Louis Coll. Pharm.—Trust. & Alum. M.
	Philadelphia Coll. Pharm.—Pharm. M.
	St. Joseph (Missouri) Pharm. Assoc.—Semi Monthly Meet.
Thurs. 21st.	New York Coll. Pharm.—Pharm. Meet.
Mon. 25th.	Philadelphia Coll. Pharm.—Stated Meeting.
Tues. 26th.	Boston Druggists' Assoc.—Meet.
Thurs. 28th.	Kings Co. Board of Pharm.—M. in Brooklyn.

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